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CAMERA CRAFT


A PHOTOGRAPHIC MONTHLY

VOLUME XX

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CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

$40 \times 1000 = 40000$
 $30 \times 1000 = 30000$



The Cost is Seldom Calculated

The cost of using low-priced papers is seldom calculated. A photographer spends:

One-third of his time testing his negatives with low-priced brands of papers, of which no two emulsions are alike in speed, and have no latitude to compensate the variation in exposure;

One-third of his time making over prints that cannot be delivered;

The remaining third of his time explaining his failure to make good.

The successful photographer uses:

CYKO

The dependable paper — the paper that produces results.

Send for
CYKO MANUAL and PROFESSIONAL CYKO POINTER.

AnSCO Company

Binghamton, N. Y.



WAYSIDE FLOWERS
By F. MORRIS STEADMAN

CAMERA

CRAFT



A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

VOL. XX

JANUARY, 1913

No. 1

Some Advertising That Pays

By Lawrence Heyd Smith



With Illustrations by the Author



EASTER LILIES. Sent out at Easter time.
Also on Carbon Green

DVERTISING is, in its way, as much of an art as is Photography, and in the hands of an expert it can be made to produce wonderful results. Its function in business life is to create, in the mind of the consumer, a demand for the thing advertised. Large national advertisers such as the Cream of Wheat people, Proctor & Gamble of Ivory Soap fame, and any number of others, spend enough in a year to make the ordinary man rich and independent for all time. Their advertising is different from that which will be considered in these notes in that the concerns mentioned do not aim for direct results and sales. Rather, it is their desire to create a demand for their goods by the ultimate consumer, which in turn

forces the retail and wholesale dealers to supply this demand. This form of publicity might be called indirect or general advertising and the photographer

CAMERA CRAFT

is not particularly concerned with it. What the photographer must have is direct results from his advertising in the form of inquiries and orders. It is my intention to give in this article some ideas and hints which I have put to practical tests and found to be productive of most gratifying results. The conditions vary in different cities and it is not to be supposed that a campaign along the exact lines mentioned here would be a business getter in every locality. An advertiser must study local conditions closely and plan his advertising along such lines as will find hold, and enlarge upon the point of common interest between himself and the consumer of his products. By following the general outline given here, varying it to suit the particular conditions that surround one, one will, in the writer's opinion, find that his business is greatly stimulated. The ideas given will be found more practical for the commercial man than for the portraitist, for the reason that I am not at all familiar with the requirements and conditions of the latter, being engaged in commercial work exclusively.

The first things to consider in planning an advertising campaign, are the different forms of advertising and choosing the form or forms that will produce the best results for the amount of money invested. It might not be out of place to here caution the photographer who is planning to invest in advertising, not to expect too great a return for his money at once. If one invests in bonds he is more than satisfied with a return from three and one-half to six per cent on the principal involved, but the beginner in advertising is usually unsatisfied unless the returns are out of all proportion to the money put into the campaign. On the other hand, suppose a photographer puts out an advertisement that costs twenty-five dollars, and can trace as a direct result of it, one new customer who orders a negative and a couple of prints. This order will probably amount to from ten to twenty per cent of the cost of the advertisement, which is a very fair return. The point to be remembered is that future orders will follow and in time pay for the advertisement many times over.

Publicity, to many persons, means nothing more than newspaper advertising, and this is one of the forms that will hardly pay the commercial photographer, although small advertisements appearing every day will bring business to the portrait man. Let me attempt to prove my assertion that newspaper advertising is not the best. Take for example a city of one hundred thousand inhabitants in which are located three hundred manufacturing plants, these last being the people you wish to interest. A first-class newspaper in a city of this size will have a paid circulation of about twenty thousand, with a possible ten thousand additional readers. Advertisements run in this paper would undoubtedly reach the manufacturers, for they are sure to be newspaper readers, but the cost would be out of all proportion to the results. To go back to our figures for a moment. These three hundred manufacturers form only one per cent of the total of circulation of the newspaper, while you have to pay for the full one hundred per cent that it reaches. There is, however, a time when such advertising may be used to advantage and that is when first starting in business. It then gets one's

SOME ADVERTISING THAT PAYS



LOOKOUT MOUNTAIN, TENNESSEE. The first card sent out this year

name and business before the people, and tells them where he is located; but the direct, traceable results will be small.

One of the best, if not the very best, methods of advertising for the photographer is the form-letter used as a follow-up system. As its name indicates, it is a series of letters following each other at stated intervals, presenting the subject in hand in new and attractive forms each time. By his system of letters it is possible for one to present every advantage of his photographs to the prospective customer and gradually bring him to the point where orders will follow inquiries. According to *System*, there are three classes of follow-up, the Continuous, the Campaign, and the Wear-Out; the first of which will produce the best results for our present purpose. Its function is to keep oneself constantly before and in touch with the prospect, each letter bringing to his attention new facts and reasons why he should use your photographs in preference to any others. The letters must be written about a central theme, and must, needless to say, show your product in its most pleasing and attractive light. Different arguments will appeal to different people and great care must be exercised in selecting the proper point of each letter. As a general thing, quality is what the manufacturer wants in his photographs, for he knows that his own advertising will suffer from poor reproductions; which, in turn, will affect his sales department. If price is a consideration, it is up to you to show that, while the initial cost of your photographs may be more than that of your competitor, in the long run they will prove cheaper, as the selling power of his advertising will be increased by the high quality of the photographs. One more thing that can be used to advantage in this series of letters is the fact that your deliveries are always made on time. If this does not happen to be the case, change your system. Do not use all your arguments in the first letter, as following

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letters must grow stronger in selling force rather than diminish. Another thing to remember is to make them as short as possible and still tell the necessary story. A busy man is inclined to read a letter covering two-thirds of a page, while the two or three-page effusion goes into the waste basket. Get sound, snappy selling talk into each letter and give proof of what you claim. Merely asserting that a thing is so will not carry much weight today when everyone hails from Missouri. You must find the point of contact between yourself and the prospective customer, and keep hammering on that point in a logical manner until he comes around to your way of thinking. Just as samples, three of the letters I have been using are given below. They are real typewritten letters on neat letterheads, carrying a

CHATTANOOGA, TENN., Jan. 9, 1912.

Chattanooga Plow Co., City.
Gentlemen:—

This year I want to furnish you with the best photographs for your cuts and advertising that you have ever had. I can do it, too, and only ask for an opportunity to prove this fact.

When you need a photograph made, call me. I will make a negative and finish one print from it on approval. If it is not satisfactory in every respect it will cost you nothing. If it is satisfactory, I ask that I am given more of your work.

Every print that leaves my studio is guaranteed. If it is not what you want, I will either make it over or there will be no charge. All work is delivered exactly when promised, usually within forty-eight hours after the negative is made.

This surely is a fair proposition. Let's get together and make 1912 a bigger, better year for us both.

Yours very truly,

CHATTANOOGA, TENN., March 20, 1912.

Chattanooga Plow Co., City.
Gentlemen:—

Do you realize that if some one else is doing your photography on account of Price, that you are in fact losing rather than saving money?

The efficiency of your sales-force depends to a large extent upon the photographs and reproductions from photographs with which you supply it. Unless your salesmen can back up their arguments with pleasing and truthful pictures of your products, they will not get the order. Every order so lost should be charged to the cost of the photograph.

In a former letter I have called your attention to my guarantee, made possible by the high quality of my work. This holds good on every order and insures you against poor work always. If I did not honestly believe that I could furnish you with more satisfactory photographs than you are now using, I would not ask for your work.

Yours very truly,

CHATTANOOGA, TENN., May 15, 1912.

Chattanooga Plow Co., City.
Gentlemen:—

It is getting very close to the time when you must begin thinking

SOME ADVERTISING THAT PAYS

of that new catalogue for 1913. Naturally, you will want to make it more attractive than the one you put out this year, and there is no better way than to have the best illustrations you can get. You have most likely improved your products in the last twelve months, and this with my Quality photographs will bring in as much new business as you can handle.

If you want a photographic insert, I can furnish that, too. I have special equipment for just this class of work and can turn out a thousand or more in a surprisingly short time. The quality is of the same high class as in my regular work.

Don't forget that guarantee. It is back of every piece of work that I turn out.

Yours very truly,

panel down the side that suggests the variety of work done. It reads: Architectural, machinery, furniture, castings, illustrating, booklets and catalogs, interiors and exteriors, post cards, flashlights, copying, enlarging, speed and newspaper photography, photo-advertising, novelties, lantern slides, theatrical. Space thereon is also given the statement, "Good photographs make good cuts" neatly displayed.

It is not a bad idea to lighten the monotony of such a series of letters with a set of mailing cards, say one good card following each letter by about a week or ten days. It is inadvisable to put much advertising matter on these cards, usually the name and address being all that is required. The most satisfactory card for the photographer is a photograph of his own making, printed on double-weight paper, which can either be addressed and stamped on the reverse side and mailed as a post card, or sent in a manila envelope. Make the cards not only pretty (they being a sample of your work), but appropriate to the time at which they are sent. An instance of appropriateness can be given from my own experience. The opening of the local base ball season took place only a week or so before this article was written. It was made an event of some moment, practically every business concern in the city closed for the afternoon; every one was talking and thinking base ball. On the first delivery of the morning of the opening day every firm and individual on my mailing list received a good 5x7 photograph of the entire team on double-weight paper. There was absolutely no advertising on the print, only in one corner the words: "Compliments of Lawrence H. Smith," and my address. The expense was slight, but the impression created in the minds of my customers and prospects was fine, several calling me over the telephone to thank me for remembering them. A new customer was gained the next day as a direct result of the card and his initial order very nearly paid the expense of getting out the pictures. It was not so much the good qualities of the card itself, but the fact that it was timely and one that everybody was glad to receive and keep, that made it good advertising. This example is not given from reasons of personal pride, but simply to show how one can take the things that interest the people of his own city and turn them into good advertising for himself. An aviation meet, an auto race, or, in fact, anything that is at any particular time holding the attention of the people, can be turned to account in this manner.

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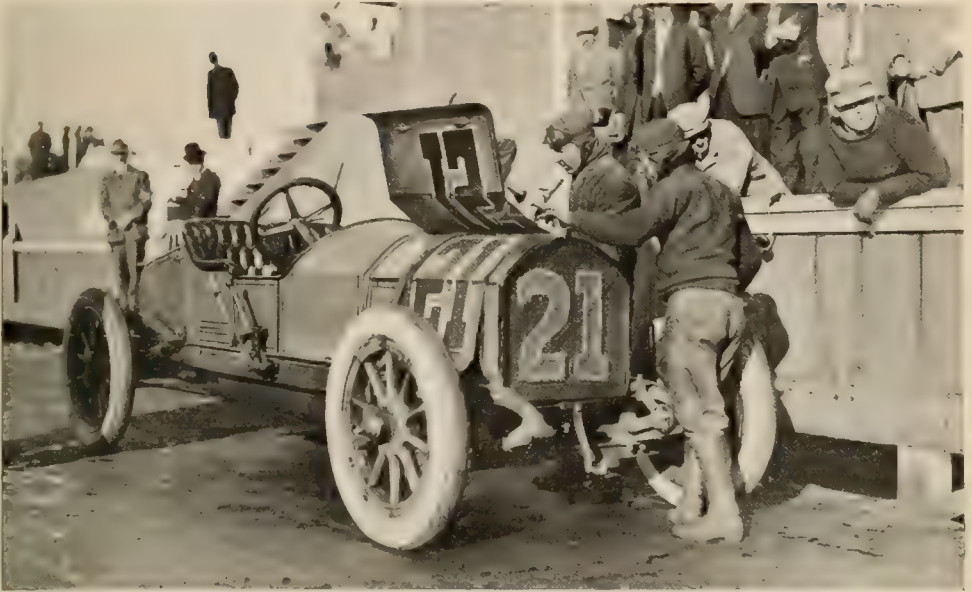
CHATTANOOGA ISLAND. The second card. Printed on Carbon Green

An exceptionally good way to get your work before the public, is to make up an album of good sample prints and on dull days make personal visits to the advertising managers of the concerns you wish to reach. They will usually be willing to give you enough of their time to look through the



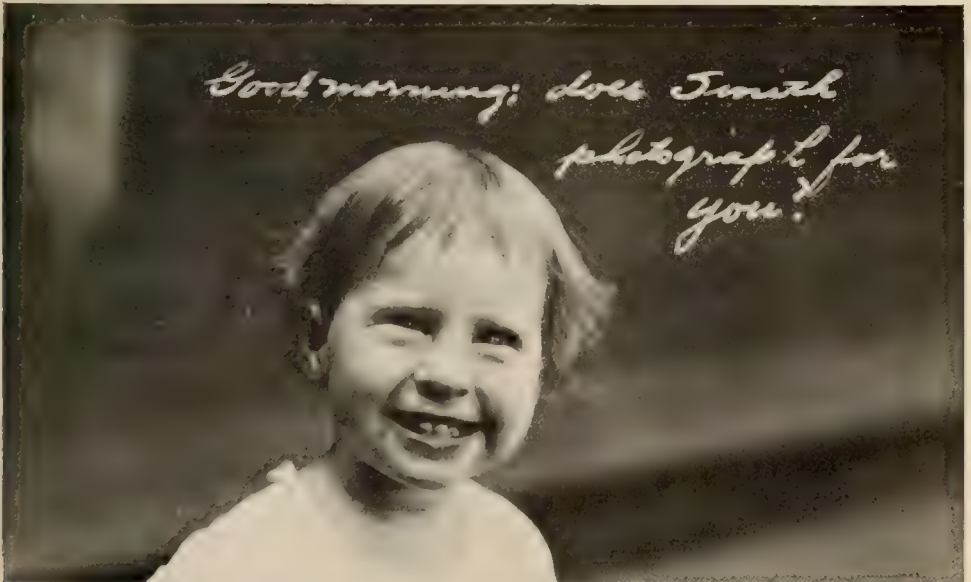
CHATTANOOGA BALL TEAM. Sent out the day of the opening game as a 5x7 print without advertising except name. An enlargement was displayed in the window of a leading department store during the week.

SOME ADVERTISING THAT PAYS



ROY HARROUN, WINNER OF THE INDIANAPOLIS FIVE HUNDRED MILE RACE. The picture was taken at Atlanta the year before, but as soon as I learned he had won the big race last year, I made a fine enlargement and displayed it in the window of the leading sporting goods house in the city, where it attracted more attention than any other I have displayed.

book and listen to an interesting line of selling talk. There is no better way of discovering their requirements, and such can be made use of in future letters of a really personal nature, letters outside of the regular follow-up system. The fad of sending out advertising novelties, such as calendars, blotters, etc., is on the decline and the larger firms are rapidly dispensing



A CHILD PICTURE. Sent out as a card simply because it was "cute" and a picture that would appeal to practically everybody who saw it.

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with such advertising. The photographer can do no better than to follow their lead in the matter.

There is a certain amount of psychology in advertising, critics to the contrary notwithstanding. This is shown in the little things that, to one not studying the conditions, seem too unimportant to be noticed. Placing a two-cent stamp on the form letters sent out is an example. If you send out letters in unsealed envelopes, signed with a rubber stamp they will lose fully half of their selling value. The two-cent stamp and written signature add the personal touch that means so much in advertising. Another point: How many of my readers could answer the question: "What is the best day in the week to have letters and cards reach the prospect?" and give a logical reason for their choice? But the query can be satisfactorily answered after one takes a look at the conditions. Everyone knows, that has given the matter any thought, that Monday's mail is the heaviest on account of there being no deliveries on Sunday. But have you ever reasoned that Tuesday's is the lightest and for that reason your advertising will stand a better chance of being read than it would on any other day in the week?

Only advertising campaigns that are planned and carried out in a systematic manner will be sales winners. Haphazard letters, advertisements, and cards, sent out any old time that happens to be convenient, lose half their force even though the idea back of them be a good one. Take a day off and make what is called a lay-out for your campaign and follow this as nearly as conditions will permit. The plan I have been following is to send out letters every month, not on the first, however, as the mail at that time is too heavy for them to receive the attention I wish them to have from those to whom they are mailed. Following each letter by about two weeks is sent a card such as I have mentioned above. The central theme in my campaign is quality and in every letter this main point is touched on from different angles. One takes up and explains my guarantee and how it is made possible by quality, another the relation of price to quality, a third, why the prospect must have the highest quality in the photographs he uses, and so on. It is along these lines that I have built a paying business from what looked, several times, very much like failure before I put my advertising on a systematic basis.

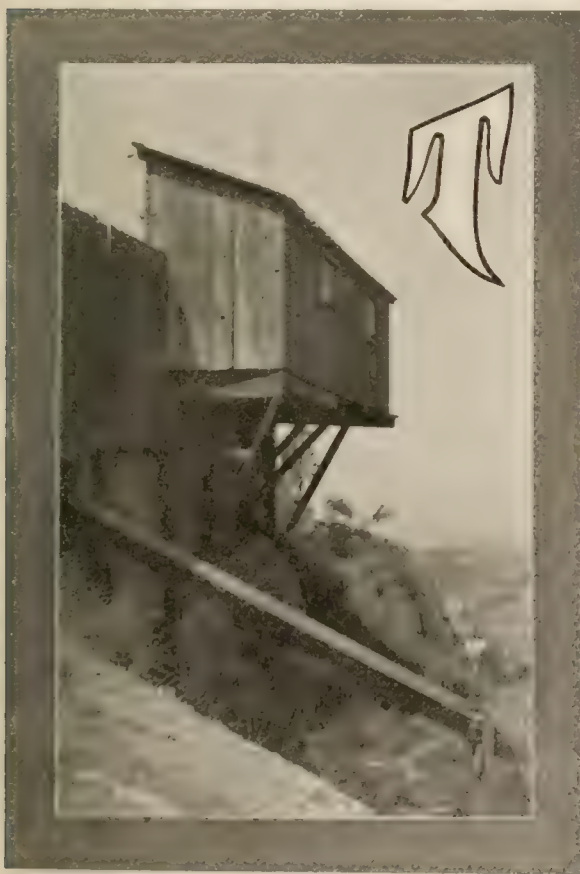
Let the people know that you are in business, and do not be afraid to blow your own horn. There is only one way to do this and that is by advertising. There is one more thing that must be borne in mind, and that is, although good advertising will bring the initial orders, it is your work, and that only, that will bring the customers back for the second time. I have never forgotten an article that I read in the *Billboard* several years ago when the moving picture craze was just beginning to boom. It dealt with the success of a certain Chicago firm in the film supply business. One of the members of the firm was asked what he considered the keynote of their success and he replied, "Early to bed and early to rise; work like h— and advertise"—and "them's my sentiments."

High Life In San Francisco

By W. H. Rabe



With Illustrations by the Author

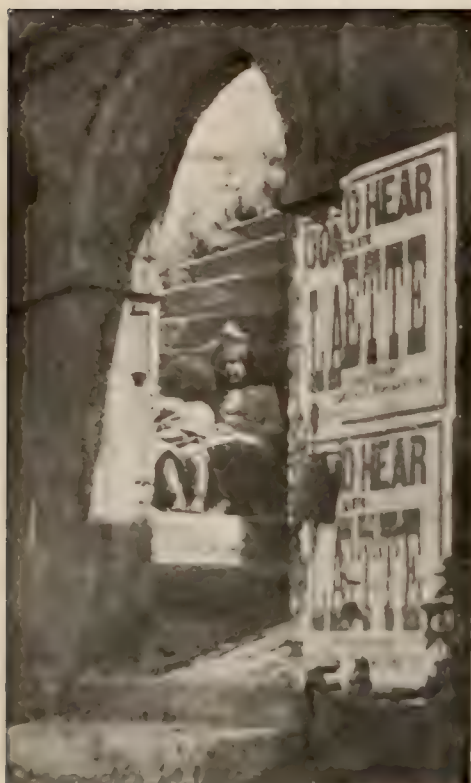


"ARCHITECTURAL DOGMAS ARE GIVEN BUT SCANT CONSIDERATION"

ELEGRAPH HILL, rising abruptly from the northern line of the city's water front, at once attracts, even commands, the eye of the visitor whose first view of San Francisco is from the Bay boat on which he completes his overland journey. Continuous blasting, extending over a period of many years but now discontinued, is responsible for the sheer fall to the street level on the east side where formerly the base of the hill met the water's edge. This hill was one of the earliest settled districts of the city, and therefore, many of the buildings have a mellowed charm, particularly the older houses that escaped the fire that swept the city and two sides of the hill a few years ago.

The population is cosmopolitan in the extreme, Italy, Portugal and Central America contributing a heavy quota. Fisherman's Wharf is just at its base on the north, and many of the fisher folks make their homes on the hill. The main approach is from the south, a continuation of Kearny Street, the ascent being made by way of a cleat-covered, plank street, called by the Italian, La Scala (the stairs), bordered by side-walks equipped for foothold in the same manner. On this street, just before the crest of the hill is reached, is a large public school, making it unnecessary for the children to leave their eyrie homes in order

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"YET LACKING IN ANY SUGGESTION OF SQUALOR"



"AS SURE FOOTED AS THE PROVINCIAL GOAT"



"MANY ARE TYPICAL SONS OF SUNNY ITALY"



"ALL ARE SELF-SATISFIED AND CONTENTED"



"YET INTERESTED IN THE CASUAL VISITOR"

HIGH LIFE IN SAN FRANCISCO



"SCENES OF AN OLD WORLD CHARACTER THAT ARE SEEMINGLY IMPOSSIBLE WITHIN THE CONFINES OF A MODERN AMERICAN CITY"



"SELF-RELIANCE IS AS STRONGLY INHERENT IN THE BOYS AS IT IS SUGGESTED BY THE UNCOMPROMISING ASPECT THE HILL PRESENTS"

CAMERA CRAFT



"ENJOY THEIR OPPORTUNITIES FOR OBSERVING THE ACTIVITIES OF THE THROB-
BING CITY LIFE SPREAD OUT BELOW"

to acquire the education that the foreign born parents seem to value even higher than does the citizen of native birth. The children of the hill are a fine and sturdy lot. Race suicide certainly does not threaten this elevated domain, where peaceful, humble homes smile down upon the restless, world-wide commerce of a busy port.

The children apparently enjoy their opportunities for observing the activities of the throbbing city life spread out below, yet with seemingly little desire to mingle therein. The hill is their home, a home where environed and environment are in perfect harmony. Many of them are typical sons of sunny Italy, all are self-satisfied and contented, yet interested in the casual visitor who may climb to their homes. The little maids are as demure and lady-like as any that are sheltered by more palatial walls, while self-reliance is as strongly inherent in the boys as it is suggested by the uncompromising aspect that the hill presents. The years of blasting have resulted in many frowning battlements and threatening declivities that would be sources of constant terror to children of other districts. But the junior population of the hill accept these things as a matter of course. They are as sure footed as the proverbial goat and good health gives them nerves that are equally as dependable. Many of the streets and alleys about which they play end abruptly in precipices where only a wire stretched across prevents the careless from falling hundreds of feet to the street level below.

HIGH LIFE IN SAN FRANCISCO



"WHERE ENVIRONED AND ENVIRONMENT ARE IN PERFECT HARMONY"

The foreign atmosphere is everywhere present. The women of many lands affect their native head-dress as unconcernedly as if in their home country, thousands of miles away. Venders offer their varied wares from baskets as in the older countries of Europe, wheeled vehicles rarely reaching these streets of steep climbs, dizzy heights, and abrupt terminations. The architecture is as charmingly unconventional as the people. Building restric-

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tions are not strictly enforced and architectural dogmas are given but scant consideration. And over all there seems to have been applied that softening influence that characterizes the location untroubled by real-estate booming and building activity. Even the most unkempt scenes are entirely lacking in any suggestion of squalor, rather, there is a charm in the suggestion of indifference to surroundings, a feeling that harmonizes perfectly with the character that the hill itself takes on. Viewed from its base, Telegraph Hill gives little suggestion of the interest that its crest affords. Approach it from almost any direction and the aspect is hardly an inviting one, giving no hint of the fact that scenes and vistas all unsuspected reward the visitor who will but scale the heights, either by one of the dizzy flights of steps, strongly suggestive of fire



"THE LITTLE MAIDS ARE AS DEMURE AND LADY-LIKE AS ANY THAT ARE SHELTERED BY MORE PALATIAL WALLS"



"VIEWED FROM ITS BASE TELEGRAPH HILL GIVES LITTLE SUGGESTION OF THE INTEREST THAT ITS CREST AFFORDS"

escapes, that here and there afford direct communication or by the more street-like approach from the south, the continuation of Kearny Street.

To the one with a camera, Telegraph Hill will appeal most strongly, perhaps, if he has an appreciation of scenes of an Old World character that are seemingly impossible within the confines of a modern American city, scenes including children that have an individuality not possessed by the average city child. There are hordes of them and all will willingly pose for a few pieces of candy. And among them may be found many beautiful types, particularly the Italian ones with their curly heads and liquid eyes. Vacation

HIGH LIFE IN SAN FRANCISCO

time should be selected, as then these subjects are at their best, that is, their dress is less conventional and their hands and faces less clean.

On the summit of the hill there is a city park space in rather a badly kept condition. Some years ago a castle-like building, intended for an observatory and amusement resort, stood in the center of this space, connected with the city by a gravity railroad from Stockton Street by way of Greenwich. It did not prove the success expected, the rails were taken up and the building used as a contractor's boarding house until destroyed by fire some eight years ago. The views in all directions from this open eminence are superb. To the north is the Bay with the Marin shore and hills beyond: Tamalpias, Alcatraz and Angel Islands. To the east the East-Bay cities stretch along the shore for



"WHERE PEACEFUL, HUMBLE HOMES SMILE DOWN UPON THE RESTLESS, WORLD-WIDE COMMERCE OF A BUSY PORT"

miles at the foot of the Berkeley and Contra Costa Hills, with the ferry boats constantly plying between. To the south is a magnificent panoram of the city's business section, and to the west a like view embracing Russian Hill, the resident district and the Fairmont Hotel crowning California Street hill. The few pictures reproduced herewith give but a faint idea of the material that the camera user will find at his disposal. The commercial photographer finds the hill his favorite viewpoint for panorams of the city and pictures of the Golden Gate. Last winter Laura Adams Armer, one of our most pictorial workers, gave an exhibition made up largely of studies from types obtained thereon. The writer has made many exposures there and feels an ever growing conviction that he has but sampled the wealth of picture making material that is available in this little known locality.



Minor Factors in Determining Exposure

By F. Morris Steadman



With Illustrations by the Author

EDITORIAL NOTE:—This, the fourth article of Mr. Steadman's series, will be found the most interesting of those so far published. The next or fifth, will fulfill his promised consideration of the subject, but Mr. Steadman wishes to make up a final article by answering therein any questions concerning the subject that our readers may care to submit. He can be addressed in care of CAMERA CRAFT, or to his permanent address, CONCORD, NEW HAMPSHIRE.

To ascertain the capacity of a box it is not sufficient to know its length alone, nor will the length and the width suffice, the three dimensions of length, width and depth being required. So it is with the making of a perfect negative. There are exact factors to be considered and employed; and, if some of these, perhaps only one of them, be neglected, the calculation as such, fails, and the "rule of thumb" comes into play. The method with which this series of articles deals is rational in that it considers the negative to be the direct result of correct exposure and normal development, secured through calculations based on an adequate light measurement, a practical subject analysis, a comprehension of plate speed, and the employment of a normal developing solution of known temperature and for a desirable fixed time.

The rationality of the method is evident, since, using it, each error can be traced back to its "first cause." It enables the careful worker, the one using attention and understanding, to balance almost perfectly the two operations of exposure and development. It enables him to secure at will, and with



RIGHT TIMING OF EXPOSURES MAKES FOR GOOD WORK WITH ANY DESIRED TREATMENT

MINOR FACTORS IN DETERMINING EXPOSURE

quite precise foreknowledge, just the kind of negative that he may require for any printing medium or for any desired special tone scale effect. I am well aware that many workers find pleasure in manipulating their developer in such a way as to correct, with more or less success, errors of exposure, thereby securing a negative having as nearly as possible the qualities sought. By making development automatic; or rather, by harmonizing the time of development with the exposure given and with the strength and temperature of the developing solution there is opened up, by this refinement of exposure, a new field which more than compensates one for the loss of interest in development. And, as I have many times stated, there is the added rationality of applying the mind to the problems of the work in the same order in which they present themselves, those of exposure first, with those of development following.

Examining into these refinements of exposure, it is first found essential that the stops be correctly graduated as to size and rightly manipulated. With nearly all iris diaphragms there is more or less false play to the lever. This can be observed by first removing the front glass of the lens and bringing the diaphragm indicator very carefully up to a certain figure on the scale, and then reversing the motion. Doing this it will be seen that the lever or diaphragm ring can be moved a greater or less distance before the blades themselves move. Some readers will find their iris stops so slack in this respect that, when the above experiment is tried at one of the smaller sizes, an error of possibly a hundred per cent may be found. The remedy is to always move the blades in the same direction, preferably from the largest opening downward. When placing any stop in position it is, of course, essential that the stops be correct as to size when the lever reaches each corresponding number on the scale as the lever is moved from the largest size downward.



A GARDEN PORTRAIT

Another preparatory step necessary to accuracy is to mark the camera extension board with numbers that will indicate the increase in exposure

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required when the lens is racked out beyond its normal focus, as in focusing close objects. Make a mark on a convenient part of the running board to indicate the position of lens for distant objects or use the hundred-foot mark if the camera has a distance or focusing scale. Then at distances equal to two, four, six, eight, eleven, fourteen, seventeen and twenty twentieths of the focal length of the lens, measuring out from this first point, place the numbers 1.25, 1.5, 1.75, 2, 2.5, 3, 3.5 and 4. Any exposure calculated for the normal focal distance position, that is, in the regular manner, should be multiplied by the number of this last group that lies nearest the lens when it is extended for close work. It is, I might add, frequently more convenient to make this correction by enlarging the stop instead of increasing the time of exposure. This is especially true with the extension that is required in doing close portraiture work.

For example, if the lens rests near the "1.5" mark when it is focused for a bust picture, simply make the fifty per cent increase in exposure by opening the stop half way to the next larger number. For copying however, a small stop is generally used and the adjustment should be made by increasing the time of exposure.

In using any exposure method other than tables, sufficient accuracy should result from following closely the general directions of the particular system used. However, for a greater refinement, the following factors should be well understood :

The light measurement. (In my own method the measurement of the brightest light falling on the subject.)

Judgment of the actinic contrast of the subject.

Knowledge of the contrast character of the plate or film being used.

The adjustment of the strength of the developer to the temperature and the time during which it is allowed to act.



A FLOWER OF THE FIELD

MINOR FACTORS IN DETERMINING EXPOSURE

A dependable method of counting seconds.

This last item is really a preparatory measure, the importance of which is frequently underestimated. It is, in fact, absolutely essential that the



A STORY BOOK, A SHADY NOOK

worker be able to count seconds accurately. The whole matter is dominated by using a phrase in which zero, or the start, is indicated by the first syllable, the quarter seconds following being marked off by the syllables which follow. It is clear, then, that two syllables will encompass one quarter of a second and for this nothing could be more logical than the word "quar-ter." In my own method of light measurement this short interval is frequently employed as it is the measure of the strength of the light, the "tint time," of full sun and sky light with the sun at such a height that one's shadow is from one and one half to three times one's height. The two syllables are more frequently used, however, to time quarter second exposures in the shade or when the sun is low. The half second exposure is counted "Nought-one-half" and the full second "Nought-one-half-and-one." A number of seconds "Nought-one-half-and-one, one-half-and-two, one-half-and-three," etc. The last syllable of each second is also the first syllable of the next one and it is only the first second therefore that needs the extra syllable "Nought" to start with. One can become proficient in this counting time by practicing counting up to ten seconds, even up to a minute, while watching the second hand of a watch. The cheap dollar watches tick in quarter seconds and are therefore especially useful in learning to time the words correctly. One should be able to count a minute with an error of not more than two to five seconds.

The light measurement: Refinement in this is achieved by practice, for

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example, using the memorandum book-cover with an aperture in the corner as in my own method. Practice gives proficiency in getting the coin in position before any light can reach the printing-out paper through the hole opening beneath; in holding the book in the actual position of the brightest lighted part of the subject, particularly where the light is not the same all over, as is often the case out of doors; in holding the book at right angles to the brightest light source; and in teaching the hand to remove and replace the coin in exact harmony with the syllable that marks the desired time. Also, after one has learned to at once recognize the least visible tint, a refinement of any desired degree may be secured by using intervals between those recommended in my method. For example, should a half second tint show a quite plainly discernible tint while a quarter second tint can only be seen with the assistance of the imagination as it were, the time might be considered as three-eighths of a second rather than a quarter or a half second. In the slower values the intermediate intervals of one and one-half, three, six, twelve, etc., seconds may actually be tried in tinting as well as the geometrical one, two, four, eight, etc., and the one producing the least visible tint selected in the ordinary manner.

Judgment of the actinic contrast of the subject: Ordinarily one works with a certain plate or film and exposes it on all kinds of subjects as they are presented. In my home portrait work, for example, it is sufficient if I make the subject conform to the contrast that I know to be correct for the film which I am using. But frequently there are views and copies that lack contrast and such subjects must be judged and the exposure reduced so that the contrast may be increased by intensification of the negative as will be explained later. At one end of the scale of subject contrasts is the bird's eye view with nothing but a "texture," having only minimum contrast; and, at the other end of the scale is the subject having near, deep shadows, associated with intense highlights illuminated by the sun or a strong artificial light. The sun, shining into a room with rather dark walls and striking the subject is an illustration of such a case. Under these last conditions it is necessary to avoid the reproduction of too great contrasts as being undesirable from a photographic point of view. In all work left in our hands, to do with and to light as our taste dictates, we should, taking a portrait for example, see that the shadows of the face have about one-fourth to one-sixth the intensity of the lighter side, a plate or film of ordinary contrast being employed. The subject table of the selected exposure method takes care of this matter, the one on page 28 of my book being an example. It is evident that if one desires to do so he can reduce the exposure for an evenly light subject by any desired percentage, easily arranging his own subject table and varying his exposures accordingly. The important thing is that the worker comprehends this matter of contrast, seeing it clearly in each subject, appreciating it as a natural truth and with understanding of the reasons for it. He must know how to modify that contrast when possible and how to modify the exposure so as to best render the subject while adhering to the normal development, the use of this last being a desirable feature of this method. In actual practice

PHOTOGRAPHING LIGHTNING

this refinement is made by closing the stop down from the indicated "speed stop" for a subject of minimum or less than normal contrast, doing this to any degree of accuracy which the worker finds he can observe. The reason for giving less exposure for flatly lighted subjects may not be clear to all. Should a subject contain good contrasts, say the normal amount, and the brightest part be given a full normal exposure, the half tones and shadow details have time to impress themselves on the emulsion to such an extent that they will develop with a proper degree of gradation during normal development. The full, rounded contrast in the negative will come as a direct result of the full scale of actinic values in the subject. But should the light values have little range in the subject, should the subject be lacking in contrast, the effect throughout the whole area of the plate or film will be uniform. In order to get, artificially, all the possible contrast and clearness in such a negative it is advisable to resort to under-exposure and forced development; or better, as advised later in this method, intensification. This method of working also minimizes the fogging action of light within the camera bellows, a danger which is always active with such subjects.

Knowledge of the character of the plate or film being used: There are on the market plates carrying emulsions suitable for contrast work, plates that are fully timed when they have eight times the exposure necessary to overcome their inertia once during normal development. These are contrasty emulsions. There are others which have what we may call a sixteen inertia contrast capacity, and still others which have a thirty-two and sixty-four inertia capacity. Of the latter two classes are the average plate and film and in making exposure refinements for the various factors it is evident that with such emulsions more variation may be allowed than would be possible with an emulsion which will only accommodate an eight inertia exposure. The adjustment of the developer to the exposed plate must be taken up in the next paper instead of in this one, as I had thought.



Photographing Lightning

By Theodore Hanson

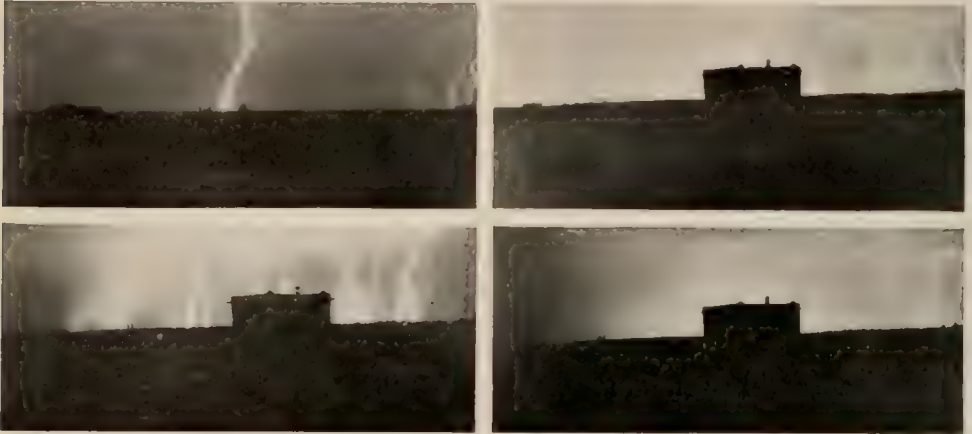


With Illustrations by the Author

The four pictures herewith were taken during a storm that visited our town about 10 p. m. one evening last summer. It passed just beyond the outskirts of the town, no rain falling where I was standing, inside of a large open porch facing directly towards the storm. The first picture was made as the storm approached, the shutter being closed immediately after the one brilliant flash, the camera being then turned a little to the east to follow the progress. F-8 stop was used, and as the flashes were judged to be at infinite or far distance,

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I placed the pointer of the focusing scale a small fraction beyond farthest distance. The film pack was used; and, with the exception of the first exposure, the shutter was left open until several sharp flashes were seen to have been where I judged they were within range, and then closed. This range was considerable, as the distance must have been a mile and a half, or more, to the body of the storm. The first picture, the one showing a single streak, is a natural effect, as the lens was closed immediately after the first flash. It was made as the storm was approaching; as shown by the two trees, which, as the camera was swung to the eastward to follow the storm, are not shown in the



FOUR ASPECTS OF A LIGHTNING STORM

other pictures. The house at the extreme right is brought well to the center of the next plate by this swing. This last, or second negative, shows no distinct, sharp flashes, but with those shown were short ones from above, called "heat lightning," and these gave the lighter background. The next negative was of the center of the storm and shows the heavier flashes. These were individual flashes that appeared at intervals, but registered themselves on the plate separately because at slightly different points. The last negative was made after the storm had nearly passed, and in the course of about an hour the storm was entirely over. This amateur then folded his camera and walked away, but though it was then eleven o'clock, the negatives had to be developed at once to determine the measure of success. The four negatives required about one and one-half hours for development, as they were decidedly slow in coming up; development being done by hand, in a tray. This was my first experience at photographing lightning, and I felt quite satisfied with the results.

The power of a man increases steadily by continuance in one direction. He becomes acquainted with the resistances and with his own tools; increases his skill and strength and learns the favorable moments and favorable accidents. He is his own apprentice, and more time gives a great addition of power, just as a falling body acquires momentum with every foot of the fall.—EMERSON.

Some Experiences and Some Deductions

By B. B. Wright



IN THE PARK

By S. S. Webb, I. P. A. 2215

KNOWLEDGE is supposed to be gained by experience. The writer has certainly had the experience, and he hopes that a partial recounting thereof may afford the reader some measure of information, if not of wisdom. Using the first person singular, my experience as a photographer dates back to wet-plate days, when to be a photographer at all required no little knowledge of chemistry; art, as applied to photography, being at that time allowed to take care of itself. Since then I have operated fifteen or more studios in as many States; in some instances in resort towns where I came in contact with the class of business catered to by the city photographers. At one time I operated a chain of five studios, dealt in photographic supplies, and employed many assistants. This proved satisfactory, financially, but the methods made necessary was not conducive to the production of artistic work. In order to get away from the care and responsibility, in order to obtain better results and derive some pleasure from trying to produce meritorious pictures, I settled down to the one-man method, even to the janitor work. The result has been pleased patrons, personal satisfaction, and almost as great financial return.

Enquiring of one of my patrons who resided in a large city, why she preferred to come to me in preference to a city studio, she replied, "Individuality." This element of individuality is the point I wish to bring prominently to your attention. It being a fundamental requisite in the production of satisfactory portraits. Only the man who does all the work from meeting the customer as she enters the studio showing and delivering the finished pictures, can secure this individuality so gratifying to his patrons. Working in that way, the output is limited; and, in a large city where expenses are high, the limited output would mean a price that would be practically prohibitive, except to the very wealthy. But in a smaller town, expenses are low, and we find the country photographer, particularly when he is as well equipped, as he frequently is, both in material, equipment and technique, as his city brother, doing the best class of work at a more reasonable price. He can give that

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touch of individuality, can render the personal service, that would cost much more in the city. He is handicapped only by the fact that his patrons must travel to the country for sittings. And vacation time removes even that, at times. I find it advisable, when catering to such customers from a studio in a small town, to avoid putting the name of the town on the mount. I simply inscribe the pictures with my name in small, neat penciling, so that, if desired, the patron can erase it and substitute some name in France or Italy.

On one occasion I visited a studio in a small town in the South. The operator was quite ill and much in need of rest. I suggested that he take a trip to the mountains and let me run the place. Arrangements were made and he was off. To my surprise I discovered that one of the former operators had gone from this studio to become the head of one of the largest and best known colleges of photography in this country. I found that I would require all my skill to maintain the quality and individuality of the work on display. And why was this former operator selected by the college? Simply because it is only in such a one-man studio that the right conditions can be found for development along all branches of the art. In this little studio I found the best equipment and the latest materials. At one end of the operating room were shelves filled with books on photography, and all the best magazines came regularly to the studio. Everything was in keeping with the high ideals that seemed to maintain. Neatness, cleanliness, and an exact system, completed a small plant of which any photographer could be proud. Complete confidence in the capabilities of the studio was manifested by the patrons. The duplicate orders that came by mail convinced me that many customers had come long distances to obtain the superior service. Competition was eliminated.

Too often we lack method in our business; the manner in which we handle our patrons is frequently at fault. Take the children; my long experience has taught me that the "true love" method is the only one. You cannot deceive a child by outward appearances only. I like to have the little ones wave their hands at me as they ride past in the street, for then I know that their impression of me is a good one, and I appreciate the effect their opinion of me will have in the minds of the mothers of other little ones. With the "grown-ups" I try to impress them with the idea that a poor result or failure is impossible; and more depends upon the success of this suggestion than upon the manipulation. I never allow them to interest me with the stock story: "I always take such a horrid picture." Some who repeat this never had a picture taken before, or, if they did, it was so long ago that they can have no knowledge of our improved methods. It must be explained that the pictures can only be satisfactory, improved methods and better equipment and material have removed all chance of failure.

Too often we find a good photographer in a small city or town, stooping to the level of small, cheap work. He tells himself that he is doing the high priced work as well, that the cheap work leads to some of the better work; that it serves as a "filler." But as long as he does it he cannot attain to a favorable reputation. He cannot afford to have his place overrun with an

DESPAIRS

unappreciative element whose desire for small cheap pictures is but a passing fancy or amusement, frequently resulting in a serious condition known as "The only picture we have." It was just taken in fun. Can't you enlarge it and make a good likeness? Do the best you can; we will pay any price in reason. And they might just as well add: "It is all your fault, anyway; you have no business making such worthless little things."

All in all, the photographer in the country town has the advantage. His patrons enjoy pure air, pure water, and wholesome food; all conducive to clear eyes, good health, and better pictures. Both he and his patrons enjoy quiet and peace, away from the nerve-wrecking noise and bustle of the large city. As a business, his is not threatened by the dangers that cause constant apprehension to almost every other small tradesman. His work is individual; it cannot be ground out in bulk. A slight economy in cost of material does not allow a large and wealthy competitor to run him out of business. He has only to please his customers, avail himself of the knowledge and material at his disposal, give his business reasonable attention, and success is his according to his worth.



Despairs

Wild was the night—no star shone in the sky,
The fierce wind howled—and, in the pathless dark,
Through the strange solitude I wandered blindly—
To left and right but blackness and abyssmal night!
Through the mad discord of the howling storm
Hark to that cry so loud and shrill! What fear and agony
Were mingled there! It ceased—and all was still.
The black sky opens—a gleam of sudden fire shoots forth,
The lightning cleaves the air, and, by its gleam
Stands clear against the blackness of the heavens
A cottage low, while, from its casements old,
A lurid beam like glow of sudden fire
Shines out upon the night and sullen gloom—
Uncanny, weird—like wizard's spell of power.
Behind me baleful shadows—and my feet are weary!
Nearer I draw to the unguarded chink whence comes the light
And peer within. A sound half groan, half murmur, strikes my ear.
A woman's form, with wild disheveled hair
And dark dilating eyes is pictured dimly there.
Why that wild stare and wilder cry?
The light falls o'er her fingers small—once white—
Now stained with dark, mysterious tint.
Spell-wrapt, she stands before the vessels of her mystic art.
The vials, crucibles, and glasses all too well the story tell

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To one who oft has felt that dark despair
Which her wan cheek and pallid lips disclose!
But list—she speaks—
“I did not think to fail!
Oh, unkind fate, it surely cannot be!
My money and my time I give so free
And all for naught!
I strive, and watch, and waste the light of day,
And pierce the secrets of the thorny way—
And all in vain!
Perhaps 'tis only just!
Full many a time, with most unkindly jest,
I mocked when others failed—yet did their best,
And laughed in scorn.
Then I had never tried this magic art,
Yet called it play, and, in my inmost heart,
Thought failure needless!
Experienced now, I know!
We toil in darkness and in dismal gloom
Hour after hour within a secret room—
Hope mocks at last!
O for success! e'en only once to win
Results to satisfy this thirst within!
Alas! I cannot!”
A thrill of sympathy my bosom fills,
But well I know no words can comfort her
In this sad hour.
For time alone, which heals all desperate hurts...
Will prove triumphant, and she then may prove
The “chief among ten thousand”—a true queen
Among us lesser lights.
But now this amateur photographer may well despair.
One plate was “flashed,” one bore a double scene,
A third was blank, while yet a fourth did show
A man without a head—his feet most prominent!
But the last drop in her full cup of bitterness,
The final cause of that blood curdling cry, was this—
With her developer some hypo had been mixed!

I turned and fled, and darkness closed around!

MINNA B. NOYES.

The best workman is he who adapts means to the noblest end. We tire of those who with no message to convey elaborate their style.—E. C. STEDMAN.

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If al hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

HYPO KILLER: Ammonium persulphite, when mixed with an alkali, is a sure killer and is regarded as the best to employ, as it does not injure the emulsion on prints or plates.—Louis S. Todd, Michigan.

STAINS: To remove stains left by permanganate and sulphuric acid reducer, try immersing the plate or film in a strong solution of plain hypo. The stains will generally disappear.—Edgar W. Otto, California.

TIGHT STOPPERS: To free a glass stopper, as a last resort, try freezing. Mix chipped ice and salt, carefully place stopper and neck of bottle therein for a few minutes, after which stopper will nearly always come out without further trouble.—Edgar W. Otto, California.

CLEANING WASTE NEGATIVES: Exceptions to paragraph, same title, by H. C. Ferris, Colorado, in recent issue. Use "Bon Ami" instead of "Sapolio." The former does not scratch the glass. A can of lye to a gallon of water avoids the necessity of scraping with a putty knife.—C. W. L. B., Kentucky.

SILVER STAINS ON FINGERS: Apply saturated solution of potassium permanganate which will stain a very dark brown. Next immerse in saturated solution of potassium metabisulphite. Repeat if necessary. Finish with "Flash," a cleaning compound sold at dealers or drug stores. Don't use soap.—C. W. L. B., Kentucky.

INEXPENSIVE KITS: To make a kit to take smaller plates, kits such as I use with my 5x7 camera, take a 5x7 piece of cardboard, mark out the desired opening, being sure to have it in the center of the card, then paste strips of strong paper about one inch wide and one and a half inches long across the corners to strengthen these points. Then take three common pins, cut off the heads, bend over a little of the ends of two of them to form a long flat staple, and drive one in across each of the two corners at one end, inserting them from the opposite side to that carrying the strips. The third pin should have its two ends hammered out flat, then bent into the form of a narrow staple and inserted near the edge of the middle at the opposite end. The plate is held by being inserted between the paper and pin cross pieces at the corners of one end,

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dropped down against the paper cross pieces at the other end and the U shaped pin turned up so as to grasp the center of that end. The kit should be placed in the holder so that the end with the pins across the corners of the opening comes at the top of the plate holder; for a 5x7 plate holder the kits may be made to take $3\frac{1}{4} \times 5\frac{1}{2}$, 4x5, $3\frac{1}{4} \times 4\frac{1}{4}$, and $3\frac{1}{2} \times 3\frac{1}{2}$ plates.—Geo. B. Levy, Ohio.



A Print and Its Making

This negative was made on a Hammer Double Coated plate, with a Bausch & Lomb-Zeiss Protar, Series V lens, using stop f-32, two seconds exposure, 2 P. M. July fifteenth. The developer used was:

Water	50	ounces
Metol	$\frac{1}{4}$	ounce
Hydroquinone	1	ounce
Sulphite of soda	$3\frac{3}{4}$	ounces
Carbonate of soda	$5\frac{1}{4}$	ounces
Bromide of potassium	60	grains

This developer was diluted six times for the negative. For the print, which is Cyko, soft glossy, it was diluted four times. The maker, Mr. Gwynn,



MID-SUMMER BY HUGHER GWYNN
located at 812 North Calvert Street, Baltimore, Maryland, advises that he would be pleased to meet any photographer who might be visiting his city, and would also be pleased to answer any inquiries or give any information in his power to our readers who may write and enclose stamp for reply.



CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

Vol. XX

San Francisco, California, January, 1913

No. 1

Our Thanks

It is customary, at this time of the year, for editors to indulge in more or less ornate and flowery greetings and expressions of good will towards their readers. This procedure has never appealed to us as being either necessary or in good taste. Such intense concern is certainly not appropriate as passing between an editor and one of his readers, never given him a thought, and between whom there can be but little more personal sympathy than there is between the user of a telephone and the president of the telephone company. Still less fitting does such expression of good will become when the reader happens to be one of those who is well tired of the publication and has decided that he will forego the pleasure of its monthly visit during the coming year. Even in the case of those readers who are somewhat in touch with the editor, either through having met him or through correspondence, there is some danger of such cordiality being in poor taste. Of course, every editor has a more or less large number of readers whom he would like to reach with his expressions of good will, and that number is always large enough to make it impracticable to do so by the spoken word or personally written letter. However, the blunderbus style of discharging the obligation he owes them does not seem to us to be any improvement over the more reasonable one of allowing these good friends to draw their own charitable deductions that lack of opportunity denies the editorial friend the pleasure of expressing the good will he feels in the fitting form of a personal letter or the like. Really, it would seem that the real friend would prefer to assume this last as the case rather than be told to stand out there in the crowd while the editor who is so obsessed with good will and kindly feeling climbs up to the top of the building and shouts forth his soul's burden through a megaphone. We have, we believe, a no small number of readers who buy our magazine simply because it is worth ten cents a copy, or one dollar a year, as the case may be. We have given them value for their money, or, at least, tried to do so. If we have failed, they will be in no great hurry to buy another copy or renew their subscription. And we know quite well that there are some who have been disappointed, some who have failed to find our magazine of enough value, to them, to warrant them in again buying it or renewing their subscriptions; we realizing fully that we cannot appeal equally to all. There are, on the other hand, many others who take our magazine and like it exceedingly well, perhaps without ever giving the editor a single thought. There are still others who no doubt endow the editor

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in their own minds, with some sort of a personality, and hold for him a most kindly feeling of esteem. This we know from the many kind letters that reach us during the course of a year, and from the many enjoyable visits that our subscribers are kind enough to make. And our acquaintanceship with this latter class tells us that they can have little, or no appreciation of the megaphone style of extending to them the seasons' greetings, and that they will hardly thank us for cheapening these words of good cheer and well wishes that should be sincere and applicable throughout, or else better withheld. We, of course, wish we had the time and the physical endurance to write a letter to each and all who would appreciate our so doing, particularly those many good friends who had a kindly feeling towards us without having given expression thereto. This is obviously impossible.

But we believe that we can, without offense to any reader, thank them as a body for the handsome support which they have given this magazine during the year just passed, and doing so, add our hope that we may be able to merit a continuation thereof. And we trust we may be fully understood in this matter. By support we mean that loyalty of the large body of subscribers, taken as a whole, which prompts them to say a kindly word for the magazine with the gratifying frequency with which they do so. One advertiser writes that he is surprised at the large number of enquiries he receives stating that they are in reply to his advertisement in our pages. Another, handling a definite specialty, writes that he has learned to regard an enquiry from one of our subscribers as practically a sale made and a good customer gained. A third, selling a regular line, writes that he feels that expensive catalogues, booklets and samples are not wasted on those of our readers who may reply to his advertisements because he has found them to be practically all working photographers and possible customers. If he fails to make real customers out of them he considers it only his own fault or the fault of his goods. These and other like expressions giving even more specific testimony of the value of our advertising pages, are far from being rare, and it is this condition that gives our magazine the premier place as an advertising medium, as attested by the amount of advertising carried. It is this amount of advertising that allows us to continue the price of one dollar per year, and our subscribers and readers are entitled to all the credit therefor. If they knew how desirous our advertisers were to get their catalogues before them, if they knew how much valuable information practically all these manuals and booklets contained, they would make still more frequent application for them. But for what they have done, our best thanks are extended. Our good friends, the advertisers, are also entitled to some thanks, but we are not unmindful of the fact that they are strongly inclined to place their patronage where it brings them the greatest returns in the way of enquiries and business, regardless of any particular liking for either the magazine or its editor.

What you know today may be obsolete tomorrow—and then where are you—unless you keep learning?—L. C. BALL

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Photographing Sunsets

A. J. Rolfe, writing in *Photography*, says:

Although occasionally one sees a striking photographic picture of a sunset, those who have attempted such subjects will probably agree that they are amongst the most disappointing things to which the lens can be turned. They are tempting, as nothing else in landscape work; but gorgeous as they may be to the eye, the photograph, unless one is very easily satisfied, seems flat and commonplace. The reason or reasons for this are not very hard to find; and a little consideration given to them and to the general subject of sunset photography may react favorably upon our work the next time such a picture is attempted.

If anyone were asked what is the most striking feature of a sunset, there could only be one reply—its coloring. In this respect it is the most brilliant and the most varied of natural objects, so that it is used whenever we want to describe anything that is gorgeously colored. Here, then, is one very good reason why our photographs should be disappointing, since most of us work a monochrome process, in which all the hues of dying day have to be represented by varying shades of brown and grey. An Autochrome plate is required if we would attempt to reproduce the tints, and even an Autochrome itself falls far behind the intensity, depth, and infinitely subtle gradations of color in such a subject.

Although those of us who are not color workers must be content to lose the charm of color, there is still that of form and of light and shade which may be secured, and which itself may be enough to make a sunset a very effective picture, even in monochrome. To render these we shall find that an orthochromatic plate of some kind is almost essential, and that even with such a plate—backed, as all plates should be—and with a

suitable color screen, there are still difficulties enough.

Sunset clouds must usually be photographed as the subject of the picture, and not merely as an accessory to a landscape composition. That is to say, it is not often possible to succeed by photographing a sunset effect, and then printing it in to some other landscape.

There are several reasons for this. One is that the sunset itself is nearly sure to be so overwhelmingly prominent and assertive in the picture as to take the first place, and whatever else we may print below it can only be either frankly subsidiary or else compete with it, and to that extent neutralize it.

Moreover, the strongly marked clouds with their concentrated illumination are not at all tractable when we attempt to fit them on to a landscape picture, and the chances are that the work when finished will reveal its composite origin. It is, therefore, best to arrange, if possible, that the sunset itself shall form the main theme of the picture, and that the landscape below shall be such as can be printed with it.

It is easy enough to write this, but it is not so easy to carry it out in practice. The landscape must be a distant one—we shall probably find that the sunset itself comes best with a lens of long focus—but, however distant, the exposure for the sky will almost to a certainty have to be much shorter than we should give were the landscape, and not the clouds above, the subject of the picture.

The exposure problem in sunset photography is a difficult one; and even the user of an exposure meter finds himself without the services of that valuable guide. Sunsets are subjects in which what shadows we may have are certainly not accessible, so that the light reaching them can be measured. If, as will very seldom happen, there

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are any foreground shadows which we could gauge, it would be quite useless to do so, since were we to expose to get detail in them we should infallibly lose all detail of any value in the sunset sky itself. It is a case in which the new Hydra plate ought to prove very valuable, since it is quite beyond the range of the ordinary plate, orthochromatic or otherwise.

Since the sunset clouds themselves will form the real subject of the picture, our exposure must be given so that, whatever may happen to the rest of the plate, they will come out correctly. The danger here is under-exposure, the brilliance of the subject naturally tempting us to reduce the time. Under-exposed sunset clouds are very common in photography; and they have the fault—which in the eyes of the novice may sometimes even seem to be the virtue—of exaggerating the contrasts of the original.

In nature, a sunset is very rarely a scene of violent contrasts. The tones of the different parts vary considerably, it is true; but even the darkest shade in the sky is still a very light tone. Yet how frequently do we find in the photograph that some of the sky tones are represented by solid black. The whole effect is false. It is, as *The Bandit* once observed, as if a bomb-shell had burst in the heavens.

This is due partly to under exposure, and partly, no doubt, in many cases, to the use of a plate that is not orthochromatic, for a subject in which deep red colors are often predominant. An orthochromatic plate is certainly what should be used; in fact, a panchromatic plate with a deep color screen will be found the best of all: it is not work in which one need in the least fear "over-correction"—a thing which is much less common than many seem to suppose. One or other of the self-screen plates will be found very much better than plates which are not orthochromatic for such work, provided, always, that the photographer wishes to get a soft, harmonious, and true rendering rather than one which is violent and sensational.

There is still the exposure problem, whatever plate we use; and it must be confessed that he who would make sure of getting a sunset picture will do well to devote two or three plates to it, giving them widely different exposures. There is no other way which

carries any certainty with it. We can measure the strength of the daylight with the meter, but we shall find that this does not go very far towards indicating what exposure will be needed. Not only are we unable to measure the light falling on our subject, but that light may be changing almost momentarily. At the end of the day a very few minutes will make an enormous alteration in the exposure that is needed.

The actual exposure, if the sun is below the horizon, may be as much as half a minute, with a comparatively large stop and rapid plate; on the other hand, if the sky is still very bright, and the sun is only temporarily veiled, a fiftieth of a second may be ample, although as short an exposure as this would be exceptional. Within such wide limits it is clear that nothing very definite can be laid down. The only thing, as we have already suggested, is to make more than one exposure, if the subject is one that is well worth getting.

When making several such exposures we should take care that the times given are sufficiently different to cover the possibilities of the case. If we think one second is required, but are not quite sure, it is a waste of plates to give one half, one and two seconds. Much better would it be to give one-tenth, one and ten seconds, or if only two plates can be used, one half second and five seconds, since the tendency is always to over estimate the strength of the light.

A difficulty in sunset photography, which must on no account be overlooked, is the great liability we are under to get ghost or flare images. A lens which, when used on any ordinary subject, is quite free from this defect, may be found to give a very bad flare when it is directed towards the sun itself. This flare may take the form of a general fog over the whole plate, or of a circular patch of light, according to the construction of the lens in use. Either is quite sufficient to spoil the plate.

A single lens is much less likely to give trouble on this score than one with separate glasses; and if we have the choice, we shall do well to use such a single combination as the half of a rectilinear or anastigmat for any work of this kind. In doing this, the removal of part of the lens may leave a bright patch on the mount—the screw threads which ordinarily hold the

A PHOTOGRAPHIC DIGEST

part that we have removed; and these, if they can be seen from any part of the lens that is left, may give rise to a very similar fault to the flare we are trying to avoid. A little strip of black paper coiled up, slipped into the tube, and allowed to open out so as to cover the shining metal, is a preventive of any trouble.

However free from flare our lens may be, however, we shall be sure to get a general fog over the plate if it is turned towards the unshielded sun. It is very important for the user of a hand-camera to remember this fact; as his finder image may not give any hint of it. If a stand-camera or a reflex is being used, the light haze will be seen on the ground glass, and the photographer will thus be warned. There is only one thing that can be done, and that is to wait until the disc of the sun is covered by a cloud, before making the exposure. It may be only a very faint cloud, one through which the circular form of the sun can be distinctly seen; but it may be enough for our purpose. Even when the sun itself cannot be seen by the eye as a distinct disc, it will often be recorded plainly enough on the plate.

Last, but by no means least, comes the necessity for guarding against over-development. The subject is one which has plenty of contrast, and unless the negative is developed too far, giving the violent sensational effects already mentioned. Softness and delicacy should be aimed at, remembering that if the picture should turn out as well as we hope, we shall, to a certainty, want to enlarge it, and enlarging from a negative of strong contrasts is seldom a success.

Important Properties of Acid Amidol

I have repeatedly in this section dealt with the work of M. Balagny, who has for years employed amidol in acid solution for all kinds of developing of plates, films and paper; and I have long been personally converted to his views, to the extent or never using any other form of developer for any purpose. Recently the developer in question has been subjected to scientific investigation by F. Monpillard, who communicates to the French Photographic Society the results of his labors, from which some important new facts appear. Among these the most important is the remarkable and unexpected fact that a

solution of amidol, instead of commencing its action at the surface of the film, starts development at the base, next the glass, and develops upwards. It is therefore obvious that if this solution be used on exposures made through the glass, as in screen color plates or in those reversed for carbon work, the effects of halation may be largely obviated, the plate, under such conditions, being removed from the developer before the affected layer of silver was reduced. The whole article, translated, appears in Nos. 2736-7 of *British Journal of Photography* and should be read by those interested in the matter.

Brown Tones of Bromide Paper

W. Jackson, writing in the *Amateur Photographer*, describes a new way of obtaining cold brown tones on bromide prints. The prints are bleached in the usual manner, washed two minutes and then immersed for five minutes in a five per cent solution of sodium sulphite or sodium metabisulphite. Without washing they are exposed to the action of daylight, after which they turn, upon washing and drying, to their proper cold tint. If desired, they can be gold toned to resemble Solio.

Night Exposures

The table of exposures herewith given has been partly compiled from articles written on the subject by several different workers, and partly from the personal experiments of the present writer. In compiling this table I have been struck by the great difference of opinion by different writers, all of whom are known to be successful in night photography.

This seems to point to the conclusion that while exposure is very important, yet it is by no means the only thing to consider. In fact, as one writer suggests, more night negatives are spoiled by faulty development than wrong exposure. In fact, it would appear that, provided a certain minimum exposure be given, this can be doubled, trebled, or even quadrupled without making any very appreciable difference in the final result if only the plate be properly developed.

Or one can put it another way by saying that one worker will get a better negative with one minute's exposure than another one gets with five minutes' exposure.

The table for night exposures, as given

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below, is based on the following conditions:
One hour or more after sunset; plate speed,
200 H. and D., 295 Watkins, 110 Wynne;
light, incandescent gas.

Figures near strong

	F:4.5	F:6.3	F:8
Shop front, well lit.	1/4....1/2....	1....	1 minute
Ditto, outside only..	1/2....	1....	2 minutes
Street corner, well lit	2....	4....	8 minutes
Side street, average..	4....	8....	16 minutes
Open square, well lit.	3....	6....	12 minutes
Illuminations, etc....	2....	4....	8 minutes
light	1/2....	1....	2 seconds
Landscape, full moon	8....	15....	30 seconds
Wet pavements.....	5....	10....	20 seconds

Backed plates strongly recommended.

Opinions vary as to the advantage of ortho. plates. Some find no advantage or disadvantage over ordinary plates. The balance of opinion is in favor of ortho. plates.

Now, a few words about development. The one thing to avoid is blocking up the highlights. All things considered, one of the best developers is dilute rodinal, ten minims per ounce, until developing action stops, then twenty-five minims per ounce if further density is required. Another favorite with the writer is metol, as follows: Water 2 ounces, Soda sulphite 1 ounce, Soda carbonate 1 ounce, Metol 25 grams.

Now, remember that the subject is mostly a dark one, therefore we want to make the most of a feeble exposure in parts of the subject. Consequently any suspicion of fog is serious, if not fatal. For this reason the plates must not be exposed to any light at all until the exposure in the camera, and then not again exposed to any light until the developer has pretty well finished its work. That is to say, the camera or dark slides must be loaded up in the dark, and the plates likewise transferred to the developing dish in the dark, and the dish covered over and kept covered for, say, three minutes before even so much as a peep at the plate is given. If the reader is accustomed to the time and temperature or tank methods, he will have no difficulty so far. But let it be remembered that most night subjects show strong contrasts (e. g., street lamps and dark shadows), and on no account must the negative be over-developed. For this reason we select a developer like metol, which brings out highlights and shadows quickly after each other.

The common but fatal mistakes are using a lot of dark-room light and going on developing, developing with the idea of getting out as much shadow detail as one is accustomed to see in ordinary daylight negatives. Of course, such a degree of detail does not exist, and, if it did, the print would not look like a night subject at all. But all the time this chasing "shadow" detail is going on the highlights are not only blocking up gradation, but are also spreading and burying marginal detail. Not only so, but prolonged development is just about the best way of making the best, that is the worst, of halation.

Do not print night subjects on glossy papers, but use a fine matt surface paper, and do not over-develop the print, or the result will look hard and chalky, and shadow delicacy will be lost. A few general hints as to choice and arrangement of subject may be useful. First of all, the most important thing to remember is to choose the subject and position of camera so that there is as much light on the subject and as little light on the camera as possible, so that whenever it can be managed one should try to get the camera in a shaded place. Sometimes one can get near enough to a lamp-post, tree, corner of building, etc., so to set the camera that the lens is shaded from a near lamp at one side which is throwing light on the subject. But in the majority of cases we are likely to have one or more street lamps facing the lens. This cannot be helped, but do not forget that lights falling near the edges of the plate, owing to the obliquity of the incident light, are likely to give more halation blur than those near the center of the picture; therefore, when possible, avoid such marginal lights. Another point is that a lot of lights scattered all over the picture give a spotty effect, therefore select the point of view which groups them up together when possible. A row of street lamps more or less in a straight line, and especially when they suggest equal distances apart, give a formal look to a picture, and more especially is this so when a row of lights runs straight across the picture. If you have a lamp near the camera the best thing is to dodge it by getting near enough to omit it from the picture.—J. Nox in *Amateur Photographer*.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Good Habits and Bad

I have a photographic friend who is quite expert himself and delights in helping others over the photographic road. One night recently he went out to the house of a mutual friend who has been dabbling in photography for three or four years without being able to achieve any success. He went out to his house with the intention of doing all he could to set the unsuccessful one on the right road, if possible. He returned disappointed. He says the fellow is hopeless, has simply gotten into the bad habit of being slipshod, and there is no cure for it. They started out by loading some holders. The slipshod one had some plates in a box, but was not quite sure whether the suspected box, a rather dilapidated one, contained unexposed plates or some forgotten negatives. Lighting the ruby lamp and examining the contents proved that they were at least not negatives and our friend believed they were not undeveloped plates that had been exposed, although he was not absolutely sure. As to the brand and speed of the plates, he was also in doubt. They might have been the kind indicated by the label on the box, but the latter's dilapidated condition suggested that they had been simply placed therein temporarily. He knew one of the holders leaked light, "always got one fogged corner in a bunch of negatives," but he did not know which one it was. It was the same way all along the line. My helpful friend worked through the production of a flashlight negative and a print therefrom, matters getting more and more discouraging as the work progressed, culminating in the arrangements for making prints. Naturally of a cheerful and optimistic disposition, he really had to give up the task as a hopeless one. And all because our slipshod friend had simply gotten into the habit of being negligent and indifferent to the ordinary requirements of the work. At the same time, there is the opposite extreme as exemplified in another mu-

tual acquaintance. This last gentleman is as exact and careful as it is possible to be, doing everything with a care and deliberation that would rob the work of much of its enjoyment for the most of us. It really must have taken him a few months to have made his first picture because he is not disposed to make a single move until it has all been studied out. I would be willing to gamble that he had a better knowledge of the factors governing exposure before his first exposure was made than has nine out of ten of the average workers. With him, this painstaking method has become a habit that will hardly permit him to use his camera on subjects where quick action is demanded. But there must be an intermediate ground; and, as in everything else, that midway between the two extremes would seem the most desirable. It is well to take reasonable care and still more important that one should try and systematize his work. The average amateur makes the larger part of his exposures on subjects of no particular value, under conditions that he knows are not the best, and gives a certain exposure time that he hopes may be about right. He does all this with the idea that he is learning, and so he is, but it is in a very slow and laborious manner. It would be much better if he would make fewer exposures, keep track of conditions and all other data, and then, from examining the results, acquaint himself with the variations that result from the varied treatment. In that way one would learn more rapidly and acquire an exactness in proportion to the care with which he established the connection between his details of procedure and the several results.

Modifying the Print

Some evening when you are at a loss as to what to do, get out two or three landscape negatives, some developing paper and the necessary developing and fixing equipment. Then supply yourself with a printing frame fitted with a sheet of fine ground-glass such

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as is used for focusing screens. Put the ground surface facing out in the printing frame, on this the negative, and with both joggled down into, say the lower left-hand corner of the frame, hold up to the light and proceed to work in in pencil on the ground surface, such pencil work as you think will hold back certain parts of the print to their advantage. Try making clouds. Try introducing a few sparkling highlights into the foreground that may be a little lacking in these things. Try your hand at blending together certain unimportant splashes of light and dark that give the print a needlessly spotted effect. Try reducing the whole general effect to one of broad masses by increasing the area and strength of the light portions already present. In fact, it is not a bad idea to even try experiments that do not even promise an improvement in the actual print under consideration, but doing it just to see what can be done. Try shaving some of the pencil lead quite fine and applying it with a paper or leather stump. These latter are quite inexpensive at any store that sells artists' material. If not allowed to remain for several days the lead applied to the ground surface of the glass can be easily wiped off with a damp cloth. This permits the work to be done over and over, and any number of experiments along this line can be tried, a print made and the effect then examined as to results. One will learn much by an evening spent in this way and will no doubt acquire quite a valuable bit of technical power that can very often be put to good use.

A Ruled Focusing Screen

Years ago, when I was a beginner at photography and ready to adopt anything that promised to help me in my work, I read that the focusing screen should be ruled off in squares as an aid to the securing of good compositions. With the screen so ruled all one had to do was to remember never to get the principal object on certain squares; but, if possible, get them on certain others, and so on with a number of like quite definite and attractive simplifications of the matter of composition. I ruled just one focusing screen, doing it with the utmost care, and a few months later spent some time, soap and water, trying to get the lines off. Pencil marks wash off a child's ground-glass slate quite easily, but those that have been made with a

hard pencil on the finer surface of a focusing screen and allowed to remain for a few months seem disinclined to be removed. The ones I had made maintained their ghost-like appearance until the glass became broken and was replaced by a new one innocent of such help to the production of perfect compositions. But during the stay of these last I often found the upright lines quite a help in architectural work and the like where it was necessary to make sure of perfectly perpendicular lines. Often the camera has to be pointed upward and the swing-back used to bring upright lines parallel. If one side of a building came some little distance from the side of the plate it was useless, on account of the inclined position of the camera, to swing it around enough to bring the line near the edge of the plate in order to see if it came straight. It never would, because in swinging the camera the arc of a circle was described by all parts of the camera except that directly over the tripod screw. Consequently, my new focusing screen was ruled with a few perpendicular lines, five in all, if I remember rightly. As I occasionally used kits that took two sizes of plates smaller than the holders, the dimensions of these plates were marked on the ground-glass and the upright lines just mentioned were the continuation of these four end boundary lines of the smaller plates, supplemented by a fifth upright drawn directly through the center of the screen. These lines have been found very helpful and seem to serve every purpose for which rulings could be desired, unless perhaps it might be advantageous to have the screen ruled in inches and quarters thereof were one doing work that necessitated the making of pictures to scale.

Inexpensive Funnels

I was in a dark-room the other day and found the worker using some ordinary waxed paper in place of the usual glass funnel. He took the sheet, folded it as one does a sheet of filter paper, cut off the point, placed a paper clip to hold a large fold in place, and poured the desired liquid into the bottle. He claimed that this plan saved a whole lot of time in washing out the usual glass funnel with the care that its ribbed surface and the tenacious nature of some solutions made necessary. It took but a moment to make the paper one.

CLUB NEWS AND NOTES

Club Secretaries and others will oblige by
sending us reports for this Department

The California Camera Club

The California Camera Club has held a number of enjoyable outings during the past summer and fall. An excursion across San Francisco Bay to Palmdale and Mission San Jose, was attended by one hundred and thirty of the members and their friends, all of whom greatly enjoyed themselves among the stately palms and bearing orange and lemon trees. The old Mission, founded in 1797, is a quaint structure, rapidly disintegrating. Many of the party made photographs, and all rambled within its adobe walls. The outings to Land's End and the Beach by day and by moonlight were well attended. Real moonlight photographs were attempted by several enthusiasts. Other outings to Golden Gate Park, Sutro Heights and other points in San Francisco have resulted in a large number of good studies being secured. Still another very successful outing was the one on the Bay, while enjoyable trips to Mt. Tamalpais and to Muir Woods were also given. Motion pictures were made on three of these excursions by President Kemp, recording the scenery and many of the events which occurred. Demonstrations and art talks have been given regularly by Dr. H. D'Arcy Power, A. T. De Rome and others, who kindly give of their time and knowledge. The annual pay show was well attended. A mixed program of vocal and instrumental music, club motion pictures, illustrated talks, autochrome slides, and cartoons, was given. Print exhibits have been held regularly in the club's assembly room, while entertainments are also provided and the interchange slides shown. The Entertainment Committee is arranging to celebrate Christmas in an elaborate manner a few evenings after the customary date, with every indication of a large attendance. The House Committee has installed new apparatus and equipment in the workrooms, and is preparing to add new furniture in the assembly rooms.

Photography As An Art

At the Montross Art Gallery in New York City there has just closed an exhibition well calculated to support the claim that advanced photography deserved to be classed as a genuine art. It included one hundred and fifty prints by thirty or more of the most accomplished photographers in the United States. The art critics of the metropolitan press spoke in the highest terms of the collection. The catalogue of the exhibition is interestingly descriptive after the fashion of the museum catalogues with which all art lovers are familiar, and judging by the list of subjects treated the producers of these choice photographs are men of fine artistic tastes and sensibilities.

Our readers, particularly those who practice photography as amateurs, will be interested in a brief reference to two of the most noteworthy photographs in the collection. One is "The Path, Sunlit Snow," by Paul L. Anderson. It is a very simple theme—a bit of rural roadway with footprints in the soft snow, but its working out is indicative of true artistic sympathy, the observer being impressed, as one critic puts it, by the beauty of the distribution of the light over the snow, the graduation of shadow that a wood engraver might envy, the well ordered design, with the path curving off into the background.

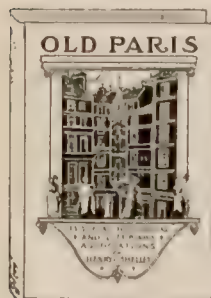
In the foreword to this catalogue of photographic gems, the writer, Temple Scott, says:

"The artist is not so much he who is highly accomplished in the technique of his art as he who is able to reproduce his own insight into the world about him by means of his medium and to do this so that the experience he has had shall through his reproduction become a common experience and a pleasure giving one. To achieve this is to acquit oneself excellently, whether it be in paint or sound or word or the camera."

OUR BOOK SHELVES

"Old Paris"

In this book, the author, H. C. Shelley, displays not only a most entertaining and enjoyable literary style, but an intimate and all-including knowledge of his subject. With



the consummate skill that this equipment provides, he guides the reader through and about the quaint and picturesque hostelry within the historical wall of the city, as well as into the notable gardens, chief theaters and grand salons frequent-

ed by royalty and its court. The social, historical and literary associations; the famous cabarets, hotels, cafes, salons, pleasure gardens, fairs and fetes of the French capital of bygone times, all come under his graphic pen for our instruction and entertainment. The illustrations are from old prints, therefore of added value. 8vo. cloth, gold and colors, boxed, three dollars, net. L. C. Page & Company, 53 Beacon Street, Boston, Massachusetts.

"Photograms of the Year 1912"

"Photograms of the Year" has for the past seventeen years been regarded as the annual specially devoted to the pictorial photographer and his work. This year's volume marks a new departure, and is the first of a new series, indicating in many ways the great advances made in pictorial photography as an art.

"Photograms of the Year 1912" is more than double the size of any of its predecessors, and the full-page illustrations, which measure 11x8½ inches, are fine examples of reproduction work. The best pictures by the leading pictorial photographers of the world are reproduced, and, apart from the great interest of the annual to photographers

generally, the book forms a notable volume of fine pictures that all art lovers should see.

Literary and pictorial contributions from all over the world are included in "Photograms of the Year 1912," which is edited by Mr. F. J. Mortimer, F. R. P. S., editor of *The Amateur Photographer*. It is obtainable from the American agents, Tennant & Ward, New York; price in cloth covers, one dollar and seventy-five cents; paper covers, one dollar and twenty-five cents; postpaid. Hirsch & Kaiser, San Francisco, stock it, as do book-stalls, news agents and photographic dealers throughout the world.

"The Grand Opera Singers of To-day"

Henry C. Lahee, well known through his other volumes on kindred topics, gives us, under the above title, a book that presents a series of pen portrayals of the leading and



rising singers who are of the greatest interest to the music-loving public of today. The biography, if such his entertaining little life histories can be called, are supplemented by carefully selected criticisms from authoritative sources, all woven together

in a most charming whole that is characteristic of the writer's well-known skill in the treating of those that have to do with our music and its production. The book is illustrated with forty-eight full-page portraits in duogravure. Cloth, gold, boxed, two dollars and fifty cents, net. L. C. Page & Company, Boston, Massachusetts.

OUR BOOK SHELVES

"The Raphael Book"

The author, Frank Roy Fraprie, is too well known in the photographic world to require an introduction to our readers. His artistic and literary talents assure us a sympathetic, appreciative, yet withal an understandable criticism of the life and work of

inspiring and refreshing. Over fifty reproductions of the artist's work are included, greatly to the value of the book. Large 12mo., cloth binding, boxed, two dollars and fifty cents; three-quarters morocco, five dollars, net. L. C. Page & Company, 53 Beacon Street, Boston, Massachusetts.



ILLUSTRATION FROM "THE RAPHAEL BOOK"

the great painter, the subject of his monograph, Raphael Sauti. Mr. Fraprie tells the story of Raphael's life and the influence which he exerted in art in a charmingly brilliant and entertaining way, and his non-technical criticism of the great painter's most important works shows that a careful and intimate study of them has been coupled with a pleasing literary skill that the reader finds

"Outdoor Photography"

The above is the title of a handsome little book that has just reached our desk from the publishers, a book by the well-known out-door photographer, Julian A. Dimock, whose pictures have done so much to add to the value of *Outing* and other high-class publications. The book is not burdened with history, science, mathematics and the like,

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but the reader is told in a direct and entertaining way just how the author goes about it to secure his own results and he is told what the author has learned about the subject during the many years which he has spent in perfecting his own work along the line of outdoor and natural history photography. The book is uniform with others composing the well-known "Outing Handbook" series, with which our readers are no doubt acquainted. Like the others, it is cloth bound, but it has the added charm of thirteen full-page reproductions of photographs selected from the author's most interesting ones. The price is seventy cents net. Published by Outing Publishing Company, 141-145 West Thirty-sixth Street, New York City.

"Photographischer Abreisskalender 1913"

This annual visitor needs only to be seen to be ordered by every photographer who reads German, it being printed in that language. However, the pictures, of which there are about one hundred and twenty, will appeal to anybody. There is a separate leaf for every three days of the year, each leaf being embellished with a reproduction of a photograph of artistic merit, and in addition a formula or some bit of valuable photographic information. Each leaf is about the size of one of our own pages, the whole arranged to hang on the wall in a neat, compact form. It is published by the well-known Wilhelm Knapp, Halle a. S., Germany; price two marks; foreign postage, sixty pfennigs. Any reader desiring a copy can send us sixty-five cents and we will have it mailed direct to their address.

"The 'Wellcome' Photographic Exposure and Diary 1913"

To boil down into one handy pocket volume the accumulated photographic wisdom of the year and of preceding years is a work of signal utility and one which should win the gratitude of all photographers. Such a task has been accomplished in the 1913 edition of the "Wellcome" Photographic Exposure Record, which is just published. Within its closely packed pages this book contains a surprising number of useful and practical paragraphs for the field, the dark room and the studio. Among the most novel features are the descriptions of new methods of toning prints green and blue, by the use of "Tabloid" toners, which act selectively, leaving the highlights only faintly colored.

There are also some interesting new notes on the technique of color photography, and on modern methods in development, including a table of times, temperatures and dilutions of varying tones by simple development with "Rytol." Every process from bromide printing to gum bichromate is lucidly and briefly described. The illustrations aptly enforce the lessons of the text, and the practical and helpful character of the advice given in the tables and epitomized directions makes the book a real dictionary of daily photographic practice. The "Wellcome" Exposure Calculator, a mechanical device which permits the exposure for any subject under any conditions to be gauged with remarkable accuracy and ease, is attached to the cover and adds greatly to the practical value of the book. Three editions are published, one for the Southern Hemisphere, one for the Northern, and the third a special edition for the United States of America. The book may be obtained from all photographic dealers and booksellers and at all railway bookstalls. Price in the United States, fifty cents.

"Hogs for Profit on the Pacific Coast"

The above is the title of a valuable brochure just issued by the passenger department of the Southern Pacific Company, copies of which can be obtained free upon request. Its object is to interest farmers and incoming settlers in an industry which has been sadly neglected on the Pacific Coast, a territory admirably suited in many ways for the profitable raising of hogs. The hand-book is the joint work of several authorities on animal husbandry in California, Oregon and elsewhere, including an introduction and other matter by A. J. Wells, the veteran writer on agricultural possibilities on the Pacific Coast. Some two dozen fine illustrations, reproductions of actual photographs, add greatly to the value of the text, particularly that part covering the different breeds and their characteristics. While this is only a paper-covered hand book, the fact that it covers the subject under the peculiar though most favorable conditions that prevail here in the Coast States, makes it of the greatest value as compared to more pretentious treatises that deal with the subject as found in the East or throughout the Middle West. Simply mention the title and address, Southern Pacific Company, Flood Building, San Francisco.

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- 2620—L. E. Whitford, 1121 E. 6th St., Fremont, Neb.
 (Was Shelton, Neb.)
- 3174—H. L. Sadler, 103 W. Broadway, Butte, Mont.
 (Was Lewiston, Mont.)
- 3261—W. L. Cornelius, Grand Island, Neb.
 (Was Battle Creek, Neb.)
- 3317—R. E. Stinson, Sacramento, Cal.
 (Was Colusa, Cal.)
- 3389—J. C. Banks, Foster, Ore.
 (Was Wren, Ore.)

Fake Pictures

It used to be said that a photograph cannot lie. Now it is known that photographs are often very skillful liars. At first the camera began to lie for fun, and produced humorous "fake" pictures. Now it sometimes lies for gain, and makes "fake" pictures that are used for evil purposes. Disreputable men have had such pictures made in which they are represented as shaking hands with the President of the United States, and afterward they have used the pictures to further dishonest schemes. Senator Lodge has now introduced a bill in the Senate that, if it passes, will make the practice dangerous hereafter. It carries a penalty of six months' imprisonment or a fine of a thousand dollars, or both.—*Youth's Companion*.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Child Pictures At Home

To catch the illusive smile and to arrest the unconscious movements of children at play, you must have a speedy lens such as the Bausch & Lomb Zeiss Tessar. Especially inside in the house in winter do you need a



speedy lens and if you are interested in this fascinating line of work, we would suggest that you write to the Bausch & Lomb Optical Company of Rochester, New York, for a copy of their latest folder on the "Bausch & Lomb Zeiss Tessar in the Home."

Just put 43-HB with your address on a postal card and mail to them today.

Keeping Film Negatives

Keeping your negatives without an Eastman Film Negative Album is like bookkeeping without a ledger. The Film Negative Album provides a strong, transparent tissue envelope for each film negative, each envelope is numbered, and one hundred envelopes are

bound in strong cloth covers. There is a complete index in the front of the album for a title or description of each negative, and the negatives may be seen through the transparent envelopes without the necessity of handling them. Negatives worth keeping at all are worth keeping in one of these very convenient Eastman Albums.

Ernemann Jubilee Competition

The firm of Heinrich Ernemann A. G., Dresden, one of the largest manufacturers of cameras, lenses and photographic apparatus in the world, are announcing a new jubilee competition involving one hundred and sixty-four prizes valued at five hundred pounds. They have prepared a booklet, a most excellent piece of work, containing as it does four beautiful helio tint prints of prize winning pictures in their 1911 competition, and this booklet describes all the conditions and prizes. In addition, the booklet contains an instructive and popularly written treatise on lenses, illustrated by drawings that add much to the informative quality of the text. The booklet has been printed in German, French, Italian and Russian, as well as English, and copies can be obtained from the United States agents, the Ernon Camera Shop, 18 West Twenty-seventh Street, New York, free of cost. Do not overlook the opportunity, but send at once.

Lewis' New Catalogue

Catalogue No. 14, 1913, issued by J. L. Lewis, Greeley Square, New York, has just reached our desk. It is a book of some forty-eight pages and cover, replete with description and prices of an excellent line of photographic goods. Particularly interesting is the list covering the material for the Oil Pigment Process for the reason that so many would like to try that delightful process did they but know where the material could be obtained. The line of cameras, lenses, and other material embraces

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much that is desirable and our readers will do well to send for a copy of this new list.

New Bellows for Old

Our good friend, Biddell, the "Camera Doctor," has been trying out every form of leather dressing that came to his notice during the past few years, besides trying numerous experiments in an effort to devise such a dressing that would be effective without being detrimental to the fibre of the leather. Some six months ago he tried a manufactured article that came to his attention; and, repeated trials and a close examination of the effect has convinced him that it is just the article that will best serve the purpose. It cleans and revives both the texture and the color of the leather, and does it without setting up any process of slow decay. It does not harden the leather, yet dries quickly without any danger of rubbing off or becoming sticky. It is known as "Nu-Lether," and is obtained in either red or black color. It is very fine for bellows, leather covered cameras, carrying cases, and any form of leather goods. A small can, enough for a good trial, costs but twenty-five cents. Be sure and give it a trial, and have your camera looking right. Obtainable of G. E. Biddell, 693 Mission Street, San Francisco.

Color Your Prints

The holiday season that has just passed has probably suggested to you dozens of uses for water colors, and these uses are not confined to photographic prints alone. Some of the most attractive Christmas and New Year cards were made so by the addition of a touch of color here and there. Of course, the colors must be transparent, and if they are not expensive, so much the better. The most practical and inexpensive colors on the market are the Velox Transparent Water Color Stamps. These colors are unequaled in quality and are put up in most convenient form for use in coloring Velox prints, bromide enlargements, lantern slides, halftone engravings, etc. A complete booklet, consisting of twelve colors arranged in perforated leaflets, making twenty-four stamps of each color, and the full directions for coloring pictures is sold for twenty-five cents. Have your dealer show you these, and see for yourself how simple it is to do color work.

Parallex Pointers

Robert D. Gray, the well-known optician and manufacturer of the Parallex Lamps, is preparing a booklet that will bear the above title. As we have had many inquiries as to the exposure necessary for enlarging with this wonderful new lamp using an ordinary Tungsten bulb, the following extract from the forthcoming booklet will interest:

"Exposure-Time: Each light-image adds fully seventy-five per cent to the actual working power of the bulb, which in a forty-mirror lamp amounts to three thousand per cent increase. This applies only at such distances from which a full size image of the light can be seen in every mirror. At the face of the lamp or at the side, where the mirrors can not all reflect to that particular point, the intensity will be less, and for that reason no figures can be given that will hold good for all purposes, but the tests tabulated below will cover average requirements. In making experiments to determine the exposure time, the negative used throughout was a quick printer, but not too thin to make good contact prints. All tests were with a No. 11C Parallex and a one hundred watt clear glass Tungsten bulb. The same negative, developer and lens stop, f-6.8, were used for all. Two and four diameters mean 10x14 and 20x28 enlargements, respectively, from the 5x7 negative. The following table gives time of exposure with No. 11C Parallex lamp for two and four diameters and for contact printing frame at opening of box.

2 Diameters on Eastman Bromide.....	1 second
2 Diameters on Artura Carbon Black.....	.....10 seconds
2 Diameters on Cyco Soft.....	90 seconds
2 Diameters on Azo Soft.....	3 minutes
4 Diameters on Artura Carbon Black.....	.....30 seconds
Contact, with ground glass, Artura Iris.....	.....1 second
Contact, without ground glass, Artura Iris.....	.....½ second
Contact, bulb only, Artura Iris.....	8 seconds

No. 15C Lamp with two hundred and fifty watts requires one-half the time given above, and with one hundred watts one-third longer exposure than above is required."

Farewell to Mr. and Mrs. Bissell

The reception given by the Daughters of the American Revolution and their friends

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to Mr. and Mrs. L. H. Bissell Monday night at the residence of Mrs. G. M. LeCrone marked a social function of rare pleasure and profit. It was given as a sort of a bon voyage to Mr. and Mrs. L. H. Bissell on their trip to California and was in the nature of a formal recognition of their many business and social virtues in behalf of the chapter and the city. It was as social and civic forces that they were received and entertained. At the close of the program luncheon was served and until a late hour thereafter social enjoyment marked an evening that will be treasured by all who were present. Mr. and Mrs. Bissell will spend a great part of the winter with their daughter, Mrs. Ruby McGee at San Francisco.—Effingham Record.

Reduction in Prices

The "Library of Amateur Photography," which has enjoyed such a large sale during the short time that it has been on the market, has always been sold for ten dollars. The library is made up of four volumes of practical photographic information embracing the methods, systems, and working plans that should enable the ambitious amateur to make his work of a much higher quality, and the information and instructions given cannot help but make his work more satisfactory and enjoyable by reason of the expert information which these books place at his service. As there were several slight imperfections extending through quite a number of the books, and these caused by the printer, they were not pronounced perfect by the publishers. To dispose of these a reduction of five dollars has been made on the set while they last. At this new price of five dollars, the library is certainly a bargain that should not be overlooked by the worker who desires to achieve success. A request made to the American Photographic Text Company, 350 Adams Avenue, Scranton, Pa., will bring illustrated circulars fully describing the library and our readers should not delay in sending for copies.

Instantaneous Color Photography in France

As is known, the autochrome plates for taking photographs in direct colors were invented and first tried in Lyon. Important improvements in their use have been made in this city during the past year that are of

interest to the photographer and to the general public. The reproduction of actual colors in a photograph has, until quite recently, been attended with the greatest difficulty, owing especially to the lack of sensitiveness in autochrome plates in comparison with ordinary plates. This defect was a serious obstacle to the instantaneous work necessary in outdoor as well as in portrait photography.

Efforts to strengthen the sensitiveness of the autochrome plate by changing the emulsion resulted in destroying the fidelity of the colors produced, but the problem appears to have been successfully resolved in two ways: First, by substituting for natural light an artificial light strong enough to reduce the time of exposure to a fraction of a second. Second, by hypersensitizing the plate through the use of certain coloring agents of the cyanide group.

For the first method flash powders are employed as a source of light, notably a so-called perchlor powder, which is a mixture of two parts of magnesium and one part of perchlorate of potash. The substitution of this powder for the light of day has marked a new step in the production of a photograph in color. The results are as favorable as those obtained in daylight, and the time of exposure can be regulated to a fraction of a second, since the quantity of light depends solely on the weight of the powder burned. In using this process the light entering the camera must be filtered through a screen different from that ordinarily employed in autochrome photography, and without it the colors reproduced under the agency of this powder would not be true to nature.

The second method of overcoming lack of sensitiveness consists in hypersensitizing the plates themselves by impregnating them with cyanide coloring agents known by the names of pinachrome, pinacynaol, and pinaverdol.

Until quite recently autochrome plates after sensitizing required the use of still another different taking screen, but with the solution now used for this process the magnesium screen currently sold may be employed. After sensitizing the plate, it must be dried very quickly, and this is a stumbling block for the amateur, as even a slight delay in the drying will injure the colors obtained. The plate is placed vertically to dry in an air-tight container sealed against the light, and this con-

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tainer incloses a receiver holding sulphuric acid or calcium chloride.

The process of hypersensitizing reduces to about one-fourth the time of exposure required for autochrome plates. The difficulty lies in the inconveniences attendant upon the work and the precautions necessarily employed. The sensitized plate will last only for a few weeks before use. The work must first of all be accomplished in absolute darkness, the drying must be very rapid, and a slight fault in the process may cause one or another of the colors to predominate. For instance, if the immersion is too long or the temperature of the solution too high, yellow will predominate, while the opposite error will cause a dominant blue. A dominant red or orange shows that the solution was too strong, and finally, a dominant green will result from too weak a solution. Despite these various difficulties, however, the process is serviceable even in the hands of the amateur. It is worthy of comment that the autochrome plate is far more widely used in Germany than in France.—Consul Carl Bailey Hurst in Consular and Trade Reports.

Notes from the Illinois College of Photography

John Vormer, 1899, and C. E. Currie, 1909, have returned to the college for review work.

Organizing seems to be the order of the day. During the past month the students have organized a Students' Social Club, a Basketball Team, a Photographers' Bowling Team and an Engravers' Bowling Team, and are now organizing a students' orchestra. The two bowling teams are having some very exciting battles, at the present time the photographers leading by only eight pins.

The College Camera Club held a salon last month, with criticism of pictures and a special lecture on home portraiture by Professor Scott. The winners in the picture contest were Messrs. Kondo, Kunishige, Lyons, and Miss Allen. Miss Josephine McLachlan entertained the Camera Club on the twenty-ninth, in honor of two departing members, Mr. Lyons and Mr. Catencamp. A delightful evening was spent, a unique feature being the singing of the national songs of Germany, Japan, China, Ireland and America by representatives of those nations present.

Herbert L. Gregg, student of 1911, writes of his good success in specializing on Pacific Coast landscape and seascape work around

his home at Bay City, Oregon. He is finding an immense sale for his prints all over the country.

Korona Panoramic Cameras

The panoramic-shaped picture is always pleasing and it is adapted to a great deal of the work done by the commercial photographer, being especially suited for groups, views of industrial plants, interiors and other subjects which require a wide angle of view without including too much sky and foreground.

The old standard sizes, 14x17 and 16x20, are poorly proportioned for much of this work and are, in these sizes, unduly heavy and bulky as portable cameras. The Gundlach-Manhattan Optical Company offer something better in their Korona Panoramic view cameras made in 5x12, 7x17 and 8x20 sizes, which cut down the weight and bulk, reduce the operating expense, and do all this without cutting down the size of the picture, as only the unused portion of the plate is eliminated. These cameras are beautifully made of cherry with walnut finish and follow the general lines of construction of the well-known Korona view cameras. The Panoramic view cameras have no reversible back, to obtain which the advantages of a reduction in size and weight would be lost.

The general design is a front and back focusing camera with detachable rear bed section, double swing back and rising and falling front operated by rack and pinion. The back springs holding the ground-glass frame are one of the special features and strong points. The frame is pivoted in the center and a strong, even pressure is obtained at all points, while the plate holder slides in easily and smoothly. In fact, the 8x20 holder can be inserted and removed as easily as the holder of a small camera. The holder itself is worthy of special notice. Any lens may be used which will cover the plate, but the best lens is the Series II Turner-Reich Convertible Anastigmat, f-6.8. By using a small size so the doublet will just cover the plate with a little to spare, the single combinations may be used separately, but the front combination alone must be left in the front of the shutter instead of in the rear as is advisable if possible. With each camera we include a strong canvas case, lined with cotton flannel, with metal clasps and the most comfortable handle made. The

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5x12 case takes the camera and six holders with extra bed section and bed brace. Cameras have sliding panels for making two exposures on one plate. A bed brace is included, also one holder with each camera. A descriptive circular can be obtained of the Gundlach-Manhattan Optical Company, Rochester, New York.

An Exceptional Opportunity

The Ansco Company, of Binghamton, New York, wishes to secure twenty-four unusually good photographs to be used for advertising purposes. Perhaps you can furnish one or more of them. About once in every so often some one takes a remarkably pleasing photograph—the subject is an unusual one, the atmospheric conditions are better than usual. The time of exposure is correctly judged, and the result is a notable negative—full of beauty and human interest. You may have such negative in your possession; or, between now and May first next, you may secure one.

The Ansco Company wishes to secure twenty-four such negatives and will be glad to pay well for them. After securing the negatives, they intend to use them for advertising purposes, and wherever they reproduce them, they will print full credit to the person who has taken the picture.

They do not want constrained poses, nor pictures that are manifestly pictures, made striking by lighting effects that are not natural. Neither do they want pictures in which professional models and painted back-grounds lend an air of artificiality. Instead, they want natural scenes—made in the house, or on an outing. A photograph of a bit of woodland, or meadow, or lake or shore, a grouping of children, or a mother and child, or a child alone—a picture of a family pet or a bit of still life, genre pictures of all kinds. These are what they need.

Those that will be selected must be artistic—not “freaky”; simple, not complicated—just the sort of pictures that any one may take if they have a good camera, film or plate, and paper—an unusually pleasing subject, and an appreciation of the beauty of natural rather than artificial effects. Such a piece of photographic work is frequently found among “snapshot” negatives, as well as among those which have been taken with greater deliberation. So we suggest that you look over your

prints, and make a selection to be submitted to them.

Also, if between now and May first next, you secure one or more negatives that are especially pleasing, make clear prints of them, and send them in. All that are sent will be handled with the utmost care and returned to you. They should be strongly protected for mailing, or expressing, and your return address written plainly on the wrapper. A letter should accompany them. The letter must state style of Ansco used, whether Ansco film or Hammer dry plate, and grade of Cyko paper.

On May first, all photographs received will be submitted to a committee of four: Wilfred A. French, editor of *Photographic Era*; Frank R. Fraprie, editor of *American Photography*, and W. I. Lincoln Adams, editor of *Photographic Times*. These three gentlemen will use their judgment as regards technical and art quality. A representative of N. W. Ayer & Son, advertising agents, Philadelphia, will determine the reproductive quality and advertising value.

For the photograph and negative which these gentlemen decide is most suitable for the purpose, the Ansco Company will pay two hundred dollars; for second best, one hundred and fifty dollars; for third best, one hundred dollars; for fourth best, fifty dollars; for fifth best, thirty-five dollars; for sixth best, twenty-five dollars; and for the next eighteen, in their order of eligibility, ten dollars each.

Naturally, this offer can be extended only to those who use an Ansco camera, Ansco film or Hammer dry plates, Ansco chemicals and Cyko paper. They do not ask any one to buy these supplies in order to enter the contest. They believe that there are already enough enthusiastic users of their products, so that the twenty-four pictures required may easily be supplied.

The negatives purchased (showing likenesses) must be accompanied by written permission from the subjects, allowing the use of them for advertising purposes. So long as you know that such permission will be granted, the release need not be forwarded when prints are submitted, but may be sent us at the time the selection is made.

As explained, each person will receive due credit in the advertisement in which his print is used, and they reserve the sole right to

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use each of the twenty-four pictures for advertising purposes, and all photographs sent them, which are not purchased, will be returned to the senders not later than June first, 1913, at which time checks will be forwarded those whose negatives are purchased. Address, Department X, Ansco Company, Binghamton, New York.

Picture Plots

That anything higher than mechanical art enters into the production of the films that make moving-picture "plays" possible we little dream, although it is a fact that a considerable portion of the literary folk of the country are daily taxing their imagination in efforts to make good films and, incidentally, to enlarge their bank accounts.

The business of film production is constantly progressing, and the rivalry among the dozen or more concerns in this country engaged in such work is so great that no expense is spared in endeavors to put out superior films. "New ideas! new ideas!" is the constant cry, and, naturally, the manufacturers turn to the literary folk for assistance. At least ten firms are buying ideas to be worked out on the screen, and the dearth of good ideas is such that a few concerns are advertising that they will pay high prices for the kind of suggestions they want. Ideas put into workable form are called "scenarios," and for acceptable "scenarios" the advertising manufacturers agree to pay from ten dollars to one hundred dollars.

All of the big companies maintain literary departments, the business of which is to pass upon "scenarios" and work up ideas submitted. Persons of recognized literary ability are at the heads of most of these departments.

As to the writing of "picture plays," one of the large firms has issued a booklet, which contains the following:

"That the motion picture, in recent years, has taken its place in the amusement world is clearly established. It differs chiefly from the stage play in that no lines are introduced. Despite this limitation and despite the brevity and low price at which this entertainment is offered to the public, film manufacturers require that their product must qualify with the ever-ascending standards, dramatically, artistically and morally. To this end, the manufacturers are spending thousands of dollars each year to obtain the most skillful producers, the best dramatic talent and the

most effective stage devices in the production of the pictures. The same is true of the story which the picture portrays.

"The writing of stories or plays for modern picture production is practically a new profession. Writers of successful motion picture plays find their work constantly in demand and at good prices. The field is not crowded with successful authors, and many who are able to produce available plays have not yet grasped the first principles of the moving picture drama, nor do they seem to have any inkling of what the manufacturers require. Many of these have the qualities, imagination, talent and ingenuity which make for success in this line, some of them having won success in the magazine field.

"In the writing of motion picture plays, any one who is capable of evolving an interesting plot adapted to motion picture presentation may win success. The proposition is the germ of the plot. It consists of a condition or situation from which the details of the story are developed. The success of a comedy composition lies in the novelty of the plot, or some new and interesting phase of an old proposition, in its interest-holding qualities, logic and probability and the humor of the individual scenes and situations. There is a wide difference between the 'comedy' and 'comic' pictures, and this difference lies chiefly in that the comedy depends largely for its humor in the cleverness and wit of the plot, where the comic is usually merely a series of situations arising from one incident or situation. In the comic film there is little plot and the scenes are loosely connected, while the success of the picture usually depends upon the fun obtained from each scene. Good comedy stories are hard to obtain, are hard to conceive and are necessarily, on account of their rarity, much in demand. It seems hard for most writers to differentiate the wit and clever ingenuity of the good comedy scenario with the trivial and frivolous one which is not."

To show the desire of the manufacturer to get wholesome pictures, the following extract is given:

"Beware of any scenes which may violate good taste, manners or morals, and avoid all crimes, such as burglary, kidnaping, highway robbery, murder and suicide, showing the methods employed in the accomplishment of such crimes."

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SAN FRANCISCO
CALIFORNIA

40 x 1000 = 40000
1000 = 50



The Cost is Seldom Calculated

The cost of using low-priced papers is seldom calculated. A photographer spends:

One-third of his time testing his negatives with low-priced brands of papers, of which no two emulsions are alike in speed, and have no latitude to compensate the variation in exposure;

One-third of his time making over prints that cannot be delivered;

The remaining third of his time explaining his failure to make good.

The successful photographer uses:

CYKO

The dependable paper — the paper that produces results.

Send for
CYKO MANUAL and PROFESSIONAL CYKO POINTER.

AnSCO Company

Binghamton, N. Y.



THE WOODLAND DRYAD
By JESSE T. BANFIELD
NINTH AMERICAN SALON

CAMERA

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A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

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FEBRUARY, 1913

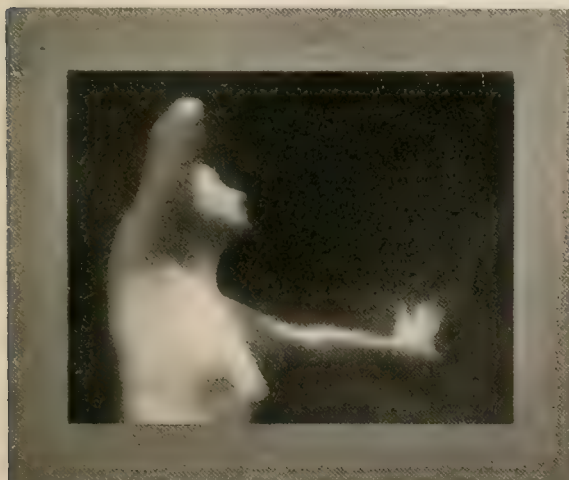
No. 2

The Work of Jesse T. Banfield

By E. B. Auerbach



Illustrated with Examples of Mr. Banfield's Work



SUPPLICATION

real quality, despite the fact that he is comparatively a newcomer in the field of pictorial photography. Maintaining his efforts and retaining the high standard which he has evidently established for himself, this new worker is destined to earn much of that appreciation that is accorded to those capable of producing artistic results by photography.

Mr. Banfield's earlier efforts were confined to landscape work, a field in

There was, recently, a one-man show on the walls of the California Camera Club that was of exceptional interest. The exhibit, while of a kind and character that at once claimed recognition, was the work of one who had, theretofore, made no bid for approbation other than the approval of his own artistic taste. In this collection of pictures, Mr. Banfield has shown himself to be an artist of no mean pictorial ability, one capable of producing work that possesses



IN NATURE'S PLAYGROUND

which he showed great feeling and appreciation of the subtle charm so uniformly lacking in the landscape work of the beginner. The soft-focus lenses that were introduced about that time appealed to him as tools that placed a new power in his hands, or at least allowed him to secure desired effects in a more direct way, and they were made an important part of his equipment. Turning to portraiture, as the beginner quite easily does, the same subtle charm was incorporated in his work. In this line, as in landscape, his skill and ability resulted in the production of many examples of a high order of pictorial merit. One or two examples of both of these classes of work are reproduced herewith; not his best, in the judgment of competent critics, but examples that are most typical of his treatment.

Taken as a whole, his work is characterized by so little mannerisms in either methods or results that it is impossible to assign the credit, or any great portion of it, to any particular means of expression. However, as practically all of the examples of his work shown herewith were either made with a soft-focus lens or else enlarged from small negatives through a lens of that character, we can assume that lenses of this type have found an important place in Mr. Banfield's estimation of the relative value of the various tools at the disposal of the pictorial photographer. Finding them so capable of interpreting his conception of the pictorial in both landscape and portraiture, he naturally appreciated the power they conferred upon the worker who desired to portray the nude, and in doing so avoid the objectionable features associated with the portrayal of the undraped figure by means of the ordinary sharp-focus lens.

It is in this latter field of work that Mr. Banfield has attained his most marked success. His preferences being for the undraped figure, posed in the open air and amid natural surroundings, his skill in landscape work makes him eminently fitted to cope with the difficulties which such subjects present in the matter of lighting, subordination, and breadth. Securing as he does such complete mastery of these, his work shows a most interesting individuality that is

THE WORK OF JESSE T. BANFIELD



A CALIFORNIA LANDSCAPE

capable of unlimited development with little danger of that mannerism so often resulting from a too close adherence to one line of subjects by workers less broad as to technique. In the serious and dignified portrayal of the nude amid out-door surroundings, we have had the most excellent examples in the work of Mrs. Brigman, another Pacific Coast worker, one to whom Mr. Banfield gives credit for his selection of the last named class of subjects, with, at the same time, a full realization of the high standard established by her work. Photographic studies of the nude, pictures in which the undraped figure plays an important part, have not wanted for recognition. Such work, when produced by one who is an artist as well as a photographer, has been acknowledged by competent critics to compare favorably with the productions of artists in other mediums, as the brush and palette; but a camera worker in this field must indeed have courage to hope for success. That Mr. Banfield is not lacking in this last essential is attested by the boldness of his work, it showing just that appreciation of atmospheric effect that stamps it as different. And not only is it in atmospheric effect that the charm of his pictures lies, but also in the delicate and pictorial treatment of the masses that form his carefully selected natural backgrounds and settings, all assisting to produce a harmonious whole, a picture with its motive untouched by any suggestion of the incongruous.

Attempting successful photographic portrayal of the undraped human figure, a portrayal that will satisfy the requirements of dignified and elevating art, is an

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undertaking of no little hazard. In fact, it seems to have become fairly well established that to achieve success in so doing requires the abandonment of the photographic skylight or other form of indoor studio in favor of the open air with its less cruel light and its more atmospheric setting or background. On the other hand, the outdoor posing of the nude requires more skill and care in order that simplicity may be maintained, that there be no evidence of a straining after effect. To be truly successful, the result must be such a harmonious correlation between the motif and the natural setting that the observer does not realize the means by which the picture was made possible, that no question as to "why" arises in the mind.

It is not the writer's purpose to maintain that Mr. Banfield's work is complete and finished in this or in any other respect, but it is held that his work shows great promise and that the pictures herewith represent a most interesting stage in the development of an artist of the camera, one who is destined to do much more and much better work, work that will be a credit to photography, work that will do much to show others the possibilities of photography as a graphic art. The writer feels quite sure that the few examples shown herewith will be appreciated, will be found enjoyable and instructive



AN OUTDOOR PORTRAIT

by those who are themselves interested in photography and its capabilities as a means of art expression. In order that other workers may profit as fully as possible by Mr. Banfield's experience, that gentleman has been subjected to a rather searching questioning, the result of which it shall be my effort to so set down as to make this article as informative as possible.

As I have said, Mr. Banfield's first work was mainly along the conventional lines of landscape and portraiture. Seeing several examples of Mrs. Brigman's work, he was deeply impressed with their strength and beauty, feeling that in them he could see the successful portrayal of that which the artist herself recognized as worthy of expression. His first efforts along this line were made in a studio, a method that proved disappointing. A great difficulty was experi-

THE WORK OF JESSE T. BANFIELD



THE CLOISTERED WAY



THE SUNBEAM'S PATH

enced in securing models that were sympathetic, capable of grasping and carrying out the ideas of the photographer. A still greater difficulty presented itself in the apparent impossibility of so controlling or manipulating the light as to obtain an effect of atmosphere around the figure, of giving it an appearance of distance other than by decreasing its size, or, as he jokingly explains, "securing the third dimension." This problem of lighting is, in this respect, somewhat different than that involved in portraiture. True, in this last it is desirable to secure an effect of space between the figure and the background, but the aim of the portrait worker is to bring the face forward, to eliminate intervening atmosphere, to make the picture a "speaking likeness." With the undraped figure employed in connection with outdoor natural backgrounds, atmosphere must extend around the figure. The wrong accent introduced into the lighting can destroy this feeling entirely, or, using the right accent, the atmosphere always present can be emphasized so as to give the picture a charm almost independent of any other feature. In outdoor work the difficulties due to lighting are of no great importance except on very bright days. There is for him a charm in having nature as a background, a background that forms a part of the picture in a most natural way, a background that becomes complementary to the subject, one that does not detract and one that becomes in itself a necessary part of the picture.

Personally, Mr. Banfield prefers the soft-focus lenses, but, as he says, "just as a matter of individual opinion." We all differ in opinion and it is well that we do, as otherwise photography would lose much of its charm and individuality through sameness as to technique. But it must not be assumed that any dependence is placed upon this or that detail of the technique for the art quality with which this worker strives to clothe his pictures. He affirms that the posing and

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lighting of the figure in connection with the careful selection of the background or surroundings is the all-important matter, and all this must, of course, be done with the essential, a definite idea, held clearly in view. With this essential, he contends, the proper posing of a nude figure may be made to express feeling, made emblematic of our emotions, made to play upon the imagination, made to inspire the highest ideals of purity and beauty. But in actual practice, ideas cannot always be carried out; often they have had to be abandoned as impractical after much expenditure of time and trouble. These abandonments, however, have not lessened the worker's belief in the necessity of having a definite idea for a picture before any real work is done. Neither has an occasional pleasing result, secured on the spur of the moment and without any previous planning, shaken this belief. As to ideas, ideas capable of being visualized into pictures, these the reader must find for himself. Good verse will suggest many; the mind, set to work upon one such, will produce many others. The difficulty is not so much to find ideas as it is to find those that can be carried out, that can be conveyed from the mind of the artist to the mind of the beholder through the medium of the picture his photographic skill enables him to produce.

As to technique, Mr. Banfield has no special pet formula for developers and finds that any good one, if properly handled, will give him the results desired. He uses Standard Orthonon plates almost exclusively, having found them to be about the best all-round plates, permitting great latitude in exposures. With them he uses a five-time color screen or one made by dyeing a plate with Filter Yellow K, on practically all outdoor work and sometimes on portraits. If **FEAR**



the subject be freckled, a color screen saves a great deal of retouching. He does not believe in retouching except to remove defects, that so-called modeling should not be indulged in under any circumstances.

As most of his work is out of doors and demands considerable walking, the 6½x8½ and 8x10 cameras have been discarded for the 5x7. This last is equipped with a good anastigmat lens, the latter being used only because it was purchased with the camera. He would, he advises, be just as well satisfied with a good rapid rectilinear for the class of work done, the high-priced lens being more necessary to those who do very fast work or who make architectural subjects a part of their undertaking. From the 5x7 negatives he makes a positive by contact, doing whatever work seems necessary on this positive. Here a great deal can be done in correcting tone values in shadows and other

THE WORK OF JESSE T. BANFIELD

masses that form the background or setting of the picture. Highlights that are too strong can be softened and subdued to the desired extent by applying a little red ink or a red transparent water color, using a small brush. Keeping in mind the finished print, which of course the positive resembles very closely, anything that can be done to improve it seems permissible to him, even the working up of a print from the negative and copying it, were that necessary. Some of the photographic purists will not agree with Mr. Banfield in this, but he has never been able to see any good reason why such application of photographic methods should not be allowed.

From the worked-up positive an enlarged negative is made through an ordinary enlarging camera, using a soft-focus lens. In this way halation, the one serious drawback to the work of this lens when used in making the original



THE NYMPH



THE LONELY NAIAD

negative, is avoided. The making of an enlarged negative is as easy as making a bromide enlargement, and with the enlarged negative one is prepared to make prints on carbon or platinum, frequently more satisfactory than being compelled to use bromide paper and enlarging thereon. And compared to making the original negatives of the desired size, the former plan is much more economical.

From these enlarged negatives are made contact prints on Etching black platinum paper. Mr. Banfield claims that this is positively the finest medium of which he knows for straight prints, and he believes there is nothing finer than a straight print from a good negative. Very frequently only a small part of the negative is wanted and many of the original negatives are discarded at once. If he secures, out of twelve exposures, one good negative, one negative capable of yielding a good print as well as a good picture, he is well satisfied. Good negatives are not made by the dozen and good pictures are even more rare. If

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one gets twelve real good pictures in a year, he is doing well. Conditions are not always such as to make good negatives possible and one must simply wait for the more favorable ones. The double-coated plates mentioned above are also used for the contact positive and the enlarged negative, because, with them, the contrast of the final enlarged negative is under absolute control. If the original negative be too soft or too hard, it is a very simple matter to correct the fault by bearing it in mind while making the contact positive and the enlarged negative therefrom. Practically all printing processes have been worked, oil and bromoil appealing most strongly as giving the pictorial worker more control than any of the others, and perhaps more depth and richness. Platinum-gum and gum-bichromate are also employed, being found fascinating and not difficult if a little care be employed. However, Mr. Banfield explains that while these last processes have pictorial advantages, it takes sunshine, patience, and some perseverance to work them successfully. Each process has some individual advantage over the others, making it advisable to have a knowledge of them all, to the end that a selection can be made of the one best suited to individual subjects when the best possible print is desired. One medium will not answer for every subject any more than will one grade of developing paper answer for every negative.

Composition

Composition means literally and simply putting several things together so as to make one thing of them, the nature and goodness of which they all have a share in producing. Thus a musician composes an air by putting notes together in certain relations; a poet composes a poem by putting thoughts and words in pleasing order; and a painter, a picture by putting thoughts, forms and colors in pleasing order. Composition understood in this pure sense is the type in the arts of mankind, of the providential governments of the world. Though no one can invent by rule, there are simple laws which it is well to know.—RUSKIN.



Perfect Negative with Proper Exposure

By F. Morris Steadman



With Illustrations by the Author

EDITORIAL NOTE: *This is the fifth and last of Mr. Steadman's promised series. He offers one or two further articles answering inquiries which his readers may desire to make. Because Mr. Steadman has occasionally mentioned his book, a few readers, unacquainted with his whole-hearted desire to help, have imagined these articles as being in the nature of advertising matter. His offer to answer, in our pages, should remove any such erroneous impression. Mr. Steadman's permanent address is Concord, New Hampshire.*



A PEACEFUL PATHWAY

In this article I shall endeavor to tell the reader how to harmonize the strength, temperature and time of development, so as to produce a perfect negative from a correctly exposed plate or film. Such harmony is only possible when exposure is a measured part of the work and its determination has been perfected in practice by careful attention to the light gradations and actinic contrasts in the subjects and by making the proper variations in exposures as demanded by the different kinds of subjects. For example, near subjects with full contrast, more distant subjects with less, and bird's-eye subjects with hardly any contrast, each requires its own special consideration. To be practical, I believe I should describe as plainly as possible how I have secured this harmony in my own every-day work, and then suggest how the method may

be modified for other plates and films.

At the moment I am using Ensign film in my home portrait work. When taking a full-figure portrait of a subject of normal complexion, I find that, with



THE CAVALIER

the emulsion now on hand, the stop pointer should go to a point half way between U. S. 32 and U. S. 16, in order to make the Solio tint time of the light equal the correct exposure. Of course, in making the exposure the stop is opened several whole numbers in order to shorten the time of exposure, but the correct exposure for the larger stop is easily found by halving the Solio or tint time as many times as this is done. Should the subject be of very fair complexion, the start would be made with the stop a little smaller, and for a very dark complexion the stop is made from half to a whole number larger. The pointer would also be opened a quarter number should the portrait be a bust, as in that position the lens is further from the plate.

It is in connection with this

last point that the reader should try to cut loose from all blind dependence on an exposure method and learn to depend on his own trials and results for his information and for the constant perfection of his method of working.

Whatever be the class of work in which the reader is most occupied, it is necessary for him to realize that the "speed stop," the one that corresponds to the "tint time" light measurement, is a thing that can be varied, within safe limits, until he secures the effect that seems most desirable. The proper basis for this experimenting is, of course, a careful measuring of the light to secure the "tint time," which tint time shall be the exposure with this selected speed stop, followed by a fixed time of development by means of which last the effect secured may be laid squarely on the speed stop used. For example, if, on a certain exterior subject the Solio tint time has been figured as the exposure with stop U. S. 32 and the result shows undertiming, he then knows that this undertiming is directly due to the use of too small a speed stop. On again trying the same subject, giving the tint time exposure with the stop opened a half or a whole number further, the effect will declare itself in a more fully timed negative. If this more fully timed negative be satisfactory, the intermediate size of stop that was used should be selected as the speed stop, the one agreeing with the tint time as found with the Solio paper. Understanding why

PERFECT NEGATIVE WITH PROPER EXPOSURE

this is so, one will speedily forget to depend blindly on any method and begin to do his own investigating.

In my own work, home portraiture, using Ensign film, having exposed on the plan last mentioned, with the pointer between U. S. 32 and U. S. 16, for the time taken by Solio to give the first appearance of a tint in the "tint time" measurement of the light, the subject having an average complexion, taken full figure, I develop with the following:

Dianol20 grains
Sulphite of soda, anhydrous.. 2 drachms
Water, at 65° Fahr.....10 ounces
Bromide of potassium, sat. sol.. 5 drops

Development is carried on for six minutes at a temperature of sixty-five degrees, and the negatives are usually quite perfect for a somewhat contrasty paper of the gaslight variety.

In this method of working the critical points are as follows: The proper lighting of the subject; judging the complexion of the sitter, or if not a portrait, its contrast; getting the tint time; and selecting the stop to correspond with that in time. Standard development following all these steps reveals instantly the accuracy or inaccuracy with which these steps have been performed. Development may show that it is safe to bring the subject a little more into the full light and utilize a longer scale of actinic values; to use a slightly larger speed stop, or to otherwise modify the procedure. It is evident that the older way in which the negatives were fixed, washed, and put to dry without critical examination, is not the most advisable.

Before describing the apparatus used for the careful examination and treatment of negatives after fixation, it will be best to explain how the above method of development may be modified to suit other emulsions than the one I am using. A six-minute development is very practical and simple, for the reason that the film becomes thoroughly and evenly saturated with the solution in that time. Should the above treatment, on applying it to some other plate or film, produce too dense negatives, as it would do with Ansco or Lumiere film, it would indicate that the emulsion were a quicker one than the Ensign, and the formula should be modified by adding more water until a six-minute development gives the desired density. Of course, the same result could be achieved



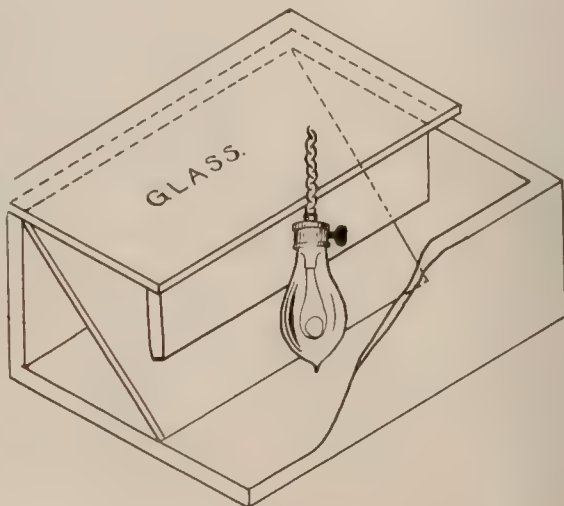
MISS B.—Tint Time, 32 seconds; Subject Factor, 1; Exposure, 32 seconds with Speed Stop U. S. 32; Exposure given, 1 second with U. S. 1.

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by decreasing the time of development if that plan be preferred. Again, should the negatives show too little detail, too little deposit in the shadows with a subject having had a contrasty lighting, it may be assumed that the emulsion is excessively contrasty, one better adapted to subjects having a shorter range of actinic gradation. Or, should the highlights be not overtinted, then it may be assumed that the speed stop for such a contrasty subject should be larger and the effect simply the result of undertiming. By thus taking into consideration the characteristics of different plate and film emulsions, one should have no trouble in harmonizing any developer to any plate or film so as to secure perfect negatives.

As to the device used for examining and treating the developed and fixed negatives, the simplest for this purpose is an ordinary wooden box, about eighteen inches long, eight inches high, and as wide or somewhat wider than the length of the negatives to be treated, arrange as indicated in the cut herewith. As shown, a sheet of glass across the end of the box supports the negatives for inspection. If using films in rolls, the edges of this glass should be dulled by drawing a file or another piece of glass across them, so that the back of the films will not be scratched as they are drawn along.

The opaque partition extending across the box in front of the lamp keeps the direct light from reaching the back of the negatives. The inclined reflector is a board on which a sheet of white paper can be placed and renewed when soiled. The glass across the top of the box can be removed at will for cleaning. With some good negatives at hand with which to compare those made, this device will immediately prove its value to any one who has taken the trouble to arrange it.



My own method is to give the films as they come from the fixing bath one change of water and then pass them over this "inspector" to see if there are any negatives that need reducing, either generally or locally. If there be such, I place enough red prussiate of potash to equal the volume of a pea or two in a graduate and dissolve it in a small quantity of water, about one ounce. I then dissolve therein enough hyposulphite of soda to equal about six times the volume of the potash. By twirling a little tuft of absorbent cotton about the end of a stick such as a film spool with the metal ends removed, I have a mop with which the reducer can be quickly applied to such parts as require thinning. The action is almost instantaneous and can be stopped immediately by passing over the part another

A PERFECT NEGATIVE WITH PROPER EXPOSURE



MISS M.—Tint Time, 64 seconds; Subject Factor, $\frac{1}{2}$; Exposure, 32 seconds with Speed Stop U. S. 32; Exposure given, 2 seconds with U. S. 2.



MISS R.—Tint Time, 8 seconds; Subject Factor, $\frac{1}{2}$; Exposure, 4 seconds with Speed Stop U. S. 32; Exposure given, $\frac{1}{2}$ second with U. S. 4.



MISS H.—Tint Time, 32 seconds; Subject Factor, $\frac{1}{2}$; Exposure, 32 seconds with Speed Stop U. S. 32; Exposure given, 1 second with U. S. 2.

piece of the cotton saturated with water and held ready in the left hand. The solution retains its strength for but a minute or two and should be renewed by the addition of more potash as soon as its action becomes slow.

When through with the reducing, all the negatives are given four changes of clean water, after which they are ready for intensification, should such be required. The solution employed for this is made up by taking one-half ounce



THE BABY BROTHER



BROTHERS AND SISTER

of bichloride of mercury, putting it into a mortar with about an ounce of water, grinding it about fifty turns with the pestle and allowing it to settle. Next the clear liquid is poured off into a one-quart Mason's jar or a large-mouthed, glass-stoppered bottle, repeating the operation until all the mercury is carried off into the receptacle. Then dissolve five drachms of potassium iodide in about two ounces of water and add to the first solution. Lastly add one ounce of hypo dissolved in about two ounces of water, when the solution will clear and be ready for use. Apply as necessary, using a fresh cotton mop, and be sure that the glass top of the inspection box has been rinsed clear. The solution is poisonous and should be handled with great care. This is a single solution intensifier and the condition of the negative can be easily watched during the operation. To stop its action, simply pass a clean wet cotton mop, made as described, over the part. Keep the glass top of the box, and the negatives as well, cool in hot weather by occasionally passing a piece of ice over the glass. Take care not to carry intensification too far, as the action seems to continue slightly, especially in warm weather. One should perfect his exposure method little by little until only a minimum amount of intensification need be done. While the above is ample instruction to enable any one to take up the work without other help, I might add that those who have my book will find similar instructions therein. Should the reader follow the very good plan of keeping on hand several grades of gaslight paper to be used as required by negatives varying somewhat in contrast, this work of reducing and intensifying will be found very light.



Plain versus Color-Sensitive Plates

Questions Answered by Prof. R. James Wallace,
Director of the Research Laboratory of
the G. Cramer Dry Plate Co.



EDITORIAL NOTE:—One of our subscribers, in seeking information on the subject covered by the title above, very wisely applied directly to Professor Wallace, and in doing so was thoughtful enough to put his questions in definite form. The replies received, in connection with the queries made, seemed so informative that he believed they would be of value to others, and therefor kindly sent them to us for publication should they be acceptable and Professor Wallace gave his consent. This last was gladly accorded, and while, as Professor Wallace, points out, there is nothing new in the information, we believe some few of our readers will be glad to have the answers to these questions from so authoritative a source.

Question: Is it not true that, as compared with ordinary plates, color-sensitive plates are inclined to be more contrasty—and that their steepness of gradation is still greater when used with a ray filter?

Answer: Yes, it is true that, given two plates, one of which is color-sensitive and the other an ordinary plate, the color-sensitive plate will, generally speaking, under the same conditions of development, time, constitution and tem-

PLAIN VERSUS COLOR-SENSITIVE PLATES

perature, give a greater amount of contrast than will the ordinary plate. In other words, the development factor or X-value of the color-sensitive plate is decidedly steeper. This however, is a matter of the utmost unimportance. If the ordinary plate requires, say, five minutes for a development factor of 1.2, then the color-sensitive plate would require, under the same conditions of time and constitution of the developer, a development time of only, say, three and one-half minutes in order to reach the same numerical development factor, hence a distinct saving in time of development. To fully answer this question would require a good many pages; in fact, in my "Studies in Sensitometry," published by the University of Chicago Press, if I remember correctly, I occupy about twenty-four pages in dealing with this difference in development factor. Mees & Shepherd, of England, occupy, with the same subject, about fifty pages in their "Photographic Process." Luckily, however, one is not compelled to make use of identically the same concentration of developer with every plate. Obviously, if color-sensitive plates work with greater contrast, or (scientifically speaking) with a higher development factor, all one has to do is to dilute his developer, or reduce his time. The gradation is not made greater by using a ray filter, except to a small degree that could only be determined by the use of delicate measuring instruments, the difference being only about fifteen-hundredths of the development factor unit.

Question: Is it not true that, on account of this inclination to contrast or steepness of gradation, color-sensitive plates have not such a wide latitude as ordinary plates—that the "normal" exposure must be calculated more closely with color-sensitive than with ordinary plates, and that with such normal exposure the plain plate will give a longer scale of printable gradations than the color-sensitive plate, such characteristics of the latter also being accentuated when a ray filter is used?

Answer: Color-sensitive plates have the same latitude as have ordinary plates, provided that the thickness of the sensitive film and the amount of silver bromide, chloride, or iodide (whichever the case may be) contained therein is the same. The latitude of a plate is not affected by its color-sensitiveness, but only by the amount of silver in the film and the thickness of said film; hence the exposure does not require this fine degree of calculation which might be inferred from your question. With reference to the gradation, the gradation practically remains the same with the color-sensitive as with the ordinary, but with the benefit of the doubt distinctly towards the color-sensitive plate; in other words, the straight portion of the characteristic curve is decidedly greater in the color-sensitive than in the ordinary plate.

Question: Is it not true that, given two plates of the same indicated speed, one plain and the other color-sensitive, the former will in actual practice allow of much shorter exposure and yet give some sort of a print, speaking now particularly of really high-speed work?

Answer: Yes, the ordinary plate will allow of quicker exposure than will a color-sensitive plate, because the introduction of the dye stuff in the emulsion, for the purpose of conferring this extra color-sensitiveness, slows down the emulsion. This is a basic principle.

Question: Is it not true that, given the two plates as mentioned in the previous question, the ordinary plate used with a light ray filter will give a more truthful rendering of color in a landscape than will the color-sensitive plate without a filter?

Answer: No, it is not true that the ordinary plate gives a more truthful rendering of colors in landscape when used with a light ray filter, than does a color-sensitive plate without a filter. Color-sensitive plates (with the exception of the slow ones) are not intended for use in landscape or other color reproduction work without a filter.

Question: Is it not true in the average run of amateur practice, consisting largely of snap shots, family groups, window-lighted and outdoor portraits, and an occasional landscape, that it is only the exceptional subject that will be better rendered by a color-sensitive plate, either with or without a screen, than by a plain plate?

Answer: It may be taken as axiomatic that every subject presenting color will, in every case, be rendered better by the use of color-sensitive plates than with the ordinary ones. It is only a question of a brief time (counted in years) when the ordinary plate will be used for nothing but the reproduction of black and white objects. The only thing which holds it back at the present time is the lowering of speed caused by the introduction of the dye into the emulsion. It may also be taken as axiomatic that no color-sensitive plate employed on either of the subjects referred to should be used without a color screen; because, no matter how color-sensitive a plate may be rendered, its sensitiveness to blue-violet is much greater than the enhanced sensitiveness to other colors obtained by the addition of the dye to the emulsion, unless the dyestuff be added in such large quantity as to act as a filter. This is noticeable in the case of the "slow iso" and the various "non-filter" orthochromatic plates (so-called).

Question: Is it not true that color-sensitive plates are more difficult to use than plain plates, that more care and exactness must be exercised in their use in order to get as good average results as are obtained with ordinary plates?

Answer: No, it is not true that the color-sensitive plates are more difficult to use than the plain plates. There is no reason why the first should not develop with the same ease and facility as does the ordinary plate, the only difficulty being that one must not expose color-sensitive plates to the same intensity of dark-room illumination as one would an ordinary plate.

Individuality

The degree in which a man individualizes his work and gives it the quality of his own mind and spirit is, therefore, the measure of his success in giving his nature free and full expression. For work, in this large sense, is the expression of the man; and as the range and significance of all kinds of expression depend upon the scope and meaning of the ideas, forces, skills and qualities expressed, so the dignity and permanency of work depend upon the power and insight of the worker.—HAMILTON WRIGHT MABIE.

How To Keep Your Magazines

By C. R. Lowe



With Illustrations by the Author

In a former issue of this magazine, the editor urged the keeping of the CAMERA CRAFT file, giving several reasons therefore,—all of them very sound. By following the suggestions, I am enabled to hunt up, at very short notice, many interesting and valuable pointers contained in my small file. What I have done with my copies has increased their value to me. A few of our friends might care to do the same, so I offer my plan, not as the best, but one that any person having a little time at his disposal can easily follow. The material necessary is some liquid glue, a piece of stout hemp cord three feet long, a piece of strong muslin four or five inches wide and nine inches long, a 1x12 piece of cambric, canvas, or other cloth, preferably something dark, six sheets of writing paper as large or larger than the CAMERA CRAFT, two pieces of cardboard $6\frac{1}{2} \times 10\frac{1}{2}$, the cover of one of the magazines and one of the wrappers in which it is mailed. The tools needed are two pieces of board 3x16, two heavy cords about three feet long, a saw and a knife. These materials and tools most persons have at hand or can easily obtain.

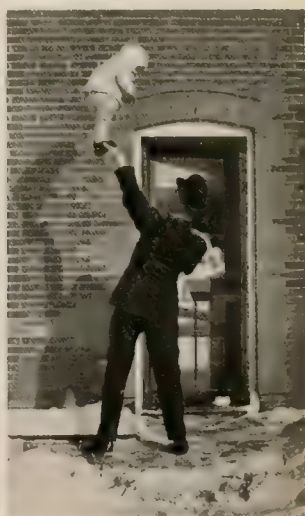
Take the staples out of the magazines, remove the unnumbered pages and pile the sections in their regular order. Cut the six sheets of writing paper the size of the magazine page, place three on the top and three on the bottom of the pile; these are for fly leaves. Hold all together and even them by striking the top and back edges on the table. Place the evened sections carefully between



GRANDMA'S PET



THE CALICO GOWN

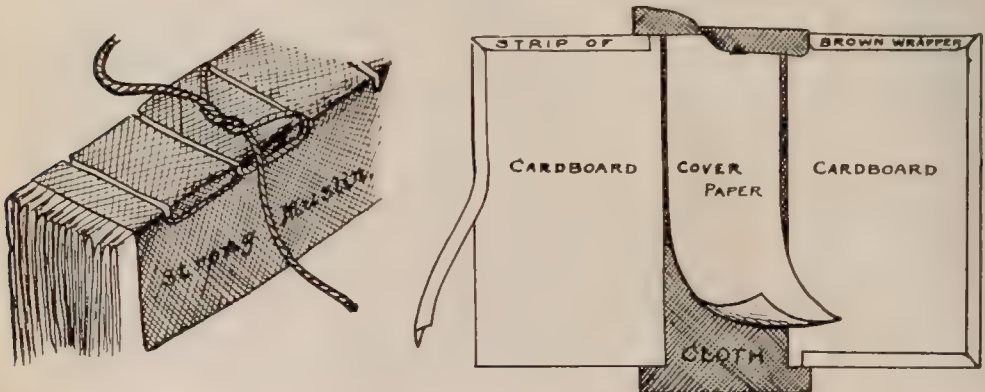


UP TO THE SKY



AN EVERY-DAY PICTURE BY AN EVERY-DAY AMATEUR

the two boards so the staple edge or back extends nearly a quarter of an inch out from between the edges of the boards, then tie the boards firmly together with the heavy cords just beyond the ends of the book. Begin half an inch from the top of the book and saw across the back nearly as deep as the edge of the retaining boards will allow. Make nine of these cuts an inch apart and one more half an inch from the bottom. Smear the back of the book-to-be with glue, working as much as possible into the saw cuts. Now take the muslin, lay it lengthwise and evenly on the back, and work it well into the glue; after which cut through the muslin at the sawed notches and equally as deep. Glue the middle of the hemp cord and press it to the bottom of the first notch. Apply some glue to the cord a little further up, tie in a single common knot and seat it well in the bottom of the next notch and draw tight. Continue thus to the



HOW TO KEEP YOUR MAGAZINES

last notch. When this is done, the book can be taken from the boards, and while the muslin is held close to the book it can be drawn tight.

Now for the cover. From a discarded magazine cover cut a strip $2 \times 10\frac{1}{2}$ and glue it in the center of the cambric or canvas. Smear a strip an inch wide on one side of each of the cardboards with glue and lay them on the cambric along and right up to the edge of the two-inch strip already there, making sure the top of the boards and the strip make a straight line. Turn the whole over and wipe the cambric and the boards well into contact, reverse and fold the projecting cambric down on the boards and glue. Select one side for the front, and with strips cut an inch and a half wide from the brown wrapper, bind the three edges *passé partout* fashion. Trim the front magazine cover to $6\frac{1}{4} \times 9\frac{1}{2}$ and paste it in the middle of your front board cover. Bind the three sides of the back cover as you did the front one and decorate this with the back of a magazine cover if you wish. This completes it. Flour or starch paste will be found easier to work for parts having no strain.

To put the cover on. If the back of the book is still sticky, cover it with paper, which can be allowed to remain. Place the book between the covers and even it at top and bottom, drawing the cover tight around the back. Lift the top cover back on the table, place a 9×12 piece of newspaper under the first fly leaf; and, taking care not to move the book on the cover after the fitting, spread glue over the muslin, working it well into the cloth; cover the rest of the fly leaf with paste and finally replace the cover, drawing it tightly over the back.



MAMMA SAID I MUSTN'T TOUCH



WHERE IS THAT SNOW MAN?

To press well into contact, it may be carefully lifted and wiped into place. If the paste is given time to fully moisten the fly leaf, there will be no trouble with wrinkles, otherwise they will occur. Proceed with the other back in the same manner. Do not glue back of the hemp cord, that the back may be loose. Finally lay the newly bound volume of CAMERA CRAFT under the weight of several other books till dry, and wouldn't it be a joke on the book if it should be found later that it is in the cover upside down?

Following these directions will give you a book a little less than one and a quarter inches thick, with a good front cover and a loose back, one that will open well and will never lose a leaf. The resultant volume will be very presentable, and will be serviceable to a degree that is most satisfactory.

Imagination

By imagination the architect sees the unity of a building not yet begun and the inventor sees the unity and varying interactions of a machine not yet constructed, even a unity that no human eye ever can see, since when the machine is in actual motion, one part may hide the connecting parts and yet all keep the unity of the inventor's thought.

By imagination a Newton sweeps sun, planets and stars into unity with the earth and the apple that is drawn irresistibly to its surface and sees them all within the circle of one grand law.

Science, philosophy and mechanical invention have little use for fancy, but the creative, penetrating power of imagination is to them the breath of life and the condition of all advance and success.—"THE PRINTING ART."



CATTLE GRAZING
72

By CARL FARNSWORTH



My Work Room

By F. Belmont Odell



With Illustrations by the Author



DESIGN FOR AN INITIAL

It is upstairs, on the north side of the hall; and, though far from ideal, it is the "shop" I used to dream about when we lived in an atticless flat. It is large enough so that Mollie claims one corner for her "Singer" and in another corner, all in systematic disorder, are a battered doll, a big brown Teddy bear and dozens of tiny things just as Eilene left them last night. We three spend many chummy evenings there in the pursuit of our respective hobbies, always free from the intrusion of company, for this one room in our house is just ours. "The shop" pays big dividends, too, for it affords such absorbing recreation that "legal reserves," "mortality rates" and "gross premiums" are completely forgotten, while the cerebellum regenerates itself in the most complete relaxation possible.

Here indeed is a health re-

sort at home, a well-ventilated, make-believe artist studio where the real self runs riot and revels in the richness of photographic lore.

My work room did not just happen; it grew gradually from the Lennox soap box laboratory of my early photographic days. Any workshop should have a sensible floor covering, something waterproof and of such burly material that one does not feel like a reckless spendthrift when he sees gold chloride trickling down from the lip of an unruly graduate. Thick cotton felt sized with glue, whiting and plaster of Paris and occasionally painted with good

CAMERA CRAFT

oil paint, will last twenty years, turn water and smile gratefully when you spill King Pyro over it. Cotton felt is a waste product from the dryer machines in the paper mills, as far as I am concerned, and can be bought, after it has served its purpose at the mills, in any width up to six feet, at three cents a pound.

A table with about half an acre of surface area just suits me, and I found one at Cohen's for a dollar. A fifteen-cent can of varnish stain made it look almost new. Cohen is a good fellow; he sold me a spool cabinet with six neat drawers for seventy-five cents, drawers just the right size to hold masks, paraffine, glass cutter, push pins and countless other things so necessary to the general contentment of the photographic dilettante. This cabinet, the table, a small stand, with some comfortable chairs completes the furniture of the room.



A CORNER OF THE SHOP

A PEEP AT THE LABORATORY

Bound files of CAMERA CRAFT and three other leading magazines of our craft, supplemented with Steadman's manual and a few other standard hand books, "tipsters" and instruction books, bring to my table the cream of photographic literature and furnish solutions to problems in all phases of the art. A card index cabinet containing choice formulæ and short cuts filed in alphabetic order for quick reference is one of the most useful and frequently consulted conveniences imaginable. The data comprise many pet formulæ of specialists in the various lines, that have been culled from magazines and instruction books.

Fortunately the one window in my work room is so situated with reference to walls that it serves admirably for lighting still life and floral studies—my favorite specialty—and at the same time, being equipped with an opaque curtain shade, allows instant darkening of the room when Old Sol is prancing across

MY WORK ROOM

the zenith. My enlarging apparatus, while too rustic and homely to take out into society, could not be excelled for convenience, low cost and the quality of work of which it is capable. It cost a dollar, and besides, I had two evenings' fun designing and building it; so it is very gratifying to see it throw up its clear-cut image on the easel. My druggist friend said: "Go down cellar and help yourself," when I told him I wanted a box about "so big," and out of the heap I pulled an aristocratic-looking packing case about two feet long, one foot wide and ten inches high. I liked this particular box, first, because it had strong dovetailed corners and was made from smooth, straight-grain pine, and second, because it had a cover. Just the thing! light weight and light-tight, strong and durable. I put on two hinges to allow the cover, now made the side, to drop down, forming a door, an automatic metal clasp holding it in position



THE POPPY FIELD

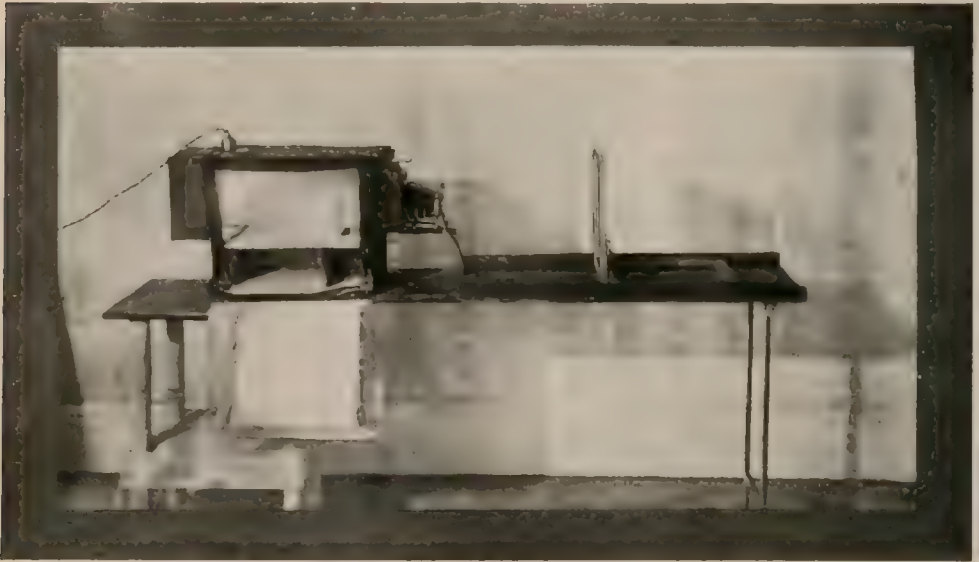
By F. BELMONT ODELL

when closed. Strips of woolen cloth tacked around its edges made this door light-tight. In one end of the box I cut an opening a little larger than my negatives, and attached two iron brackets on the outside to support the camera backed up against the opening. Two screw eyes on each side retain rubber bands that, stretched tightly, hold the camera in rigid contact. The detachable back of my camera was removed and in its place I attached a false back made like a picture frame with the upper end left open. The side pieces are slotted to receive the negative, which is slid in from the top. Strips of thick cloth were tacked around the opening to keep the light where it belongs.

In the top and close to the other end I cut a round hole large enough to admit the stem of an electric bulb; the bulb is inserted in the box, pushed up through the hole and screwed into a socket on the outside. This hole is also lined with a strip of cloth. Bright tin bent into a crescent and placed back of

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the light makes a simple and quite powerful reflector. My enlarger is condenserless. Three ground glasses placed upright, one inch apart, in the end opposite the light, furnish all the diffusion necessary, using a sixty-watt tungsten lamp, giving an exposure on bromide in about twenty seconds. The store that sold me the tungsten lamp got eighty cents of the dollar I spent for the apparatus, the other twenty cents being expended for paint. I used two coats of gloss white enamel on the inside of the box and one coat of black wood dye on the outside. Fine-grained tissue paper floated in water and picked up on a sheet of ordinary glass, the bubbles pressed out and a little paste applied to the edges, will, after drying, diffuse just as well as ground glass, and incidentally is somewhat cheaper. The easel track is a pine board five feet long and one foot wide. One end is fastened to a small stand with screw eyes, the other end being



THE ENLARGING BOX AND EASEL AS SET UP

supported by two folding legs. It is instantly detachable from the stand for storing when not in use. Two frames put together at right angles and secured with small iron brackets form an easel; and, being the same width as the track, it slides easily back and forth, held in place by two thin strips of wood tacked to the edges of the track and extending about one inch above its surface.

Good, serviceable trays can be made by using shallow wooden boxes, the cracks filled with putty and then two coats of enamel paint or Probus applied to the outside and inside. Paraffine, melted and poured around in a tray, will render it acid and waterproof, but unless more paraffine is used from time to time, this kind of a tray has a habit of springing a leak just as one gets ready to turn out a batch of prints. No work room should be without its waste basket. Get a big one and it will be a joy forever. My laboratory was originally built for a clothes press, and I bless the carpenter for making it so roomy. Most clothes presses are too small to hold an amateur photographer and a 3A plate holder at the same time. In my work room, I can draw the window shade, go

MY WORK ROOM



SOME CHILD POSES

into the clothes-press laboratory and safely develop a batch of plates on a blazing July day, with never a trace of fog. I built in some extra shelves for storing chemicals. Curtain hooks and screw eyes in the bottom of the shelves hold trays, printing frames, funnel, thermometer and stirring rod. One worries less about red prussiate and stomach pumps if the laboratory door is fitted with a spring lock. If there are children in the household, by all means keep all chemicals on high shelves and under lock and key. The resultant peace of mind will amply repay one for taking this extra precaution.

The rear acetylene gas lamp from a motorcycle, with its ruby glass front, furnishes just enough soft red light for use when enlarging. For developing plates I use a two-candlepower incandescent bulb covered with two thicknesses of red tissue paper; the glass of this bulb being orange, with the red tissue paper covering it, makes an odorless, clean and convenient illuminant.

Primarily, photography interests me for the relaxation it affords; however, it is somewhat consoling to have one's favorite hobby pay for itself in dollars and cents. Mine has done this, and all in a dignified, long-distance way. I have specialized in designing frontispieces, catalogue illustrating, decorative flower studies and pictorial calendars. Our gardens, the woods and fields, furnish countless subjects for the uses mentioned. Ornamental grasses, autumn leaves, even a twig of string beans, need but a little technical skill and artistic taste to be coaxed into things of beauty. Nature is lavish with her decorations; she marks the butterfly's wing with gorgeous colors, the clever amateur engraves its image in silver and sells the print to a magazine for fifty cents a square inch. Amateur photography, for the business man, relieves the high nervous tension and thereby increases his commercial efficiency. It's as wholesome as the hills, absorbing and elevating. I'll have no quarrel with art. If occasionally I produce a print which will stand the supreme test of being tolerated, after being framed and hung on my walls for thirty days, I have no concern as to what particular school of art it expresses or, indeed, if it expresses art at all. If amid all my experimenting and failures I sometimes stray artward and one of my

prints graduates from "The Shop" to a magazine page or to the wall of my library, I feel richly compensated for those heaps of wasted silver.

"After all," says popular fallacy, "it is a matter of taste."

But taste is not a personal matter. It is no more mere preference than judgment is mere opinion. It is as rare as it is supposed to be common. It implies not only artistic feeling and critical power but their cultivation also.—
LEWIS DAY.



STEREOSCOPIC DEPARTMENT

Advantage of a "Combination" Camera

By George P. Morgan, I. P. A. 1553



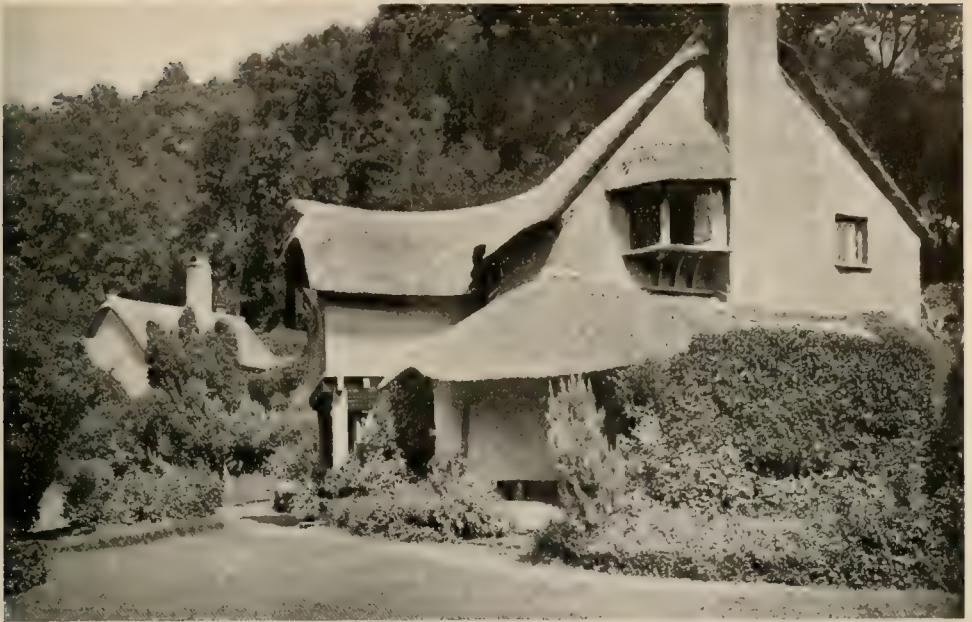
With Illustrations by the Author

The "great majority" of us, in taking up or attempting photography, as novices, usually decide to start with a camera of a small size, such as a Brownie or something of that proportion, generally with the $3\frac{1}{4} \times 1\frac{1}{4}$ size as a limit. Then those whose interest in photography "endures," more often than not desire later to own a camera of larger dimensions and capabilities. It is on those last, as well as to the others who decide in the first place to purchase a large size camera, that I am inflicting this short screed.

As one who has gone through the usual novice's experience with always a longing to produce stereoscopic views, I settled on only getting a single camera, one that would do either large single pictures, or the pair of stereos, as my fancy inclined, and I have never since regretted my selection. Being so well pleased with my choice and the results obtained with it, I would very strongly advise all, when "going in" for one of the larger size, to see to it that the camera will take stereos as well as the full-size single picture.

My camera is, of course, the English half-plate size, $6\frac{1}{2} \times 4\frac{3}{4}$, to which the American 7×5 corresponds fairly closely. But one need not even have such a large size as this last, as the $6\frac{1}{4} \times 4\frac{1}{4}$ will do as well, or even a size near to that, although to have a proper size stereo picture the plate should not be less than six inches in length. Such a camera to be used for stereo work must have a wide front and must not be one of the conical bellows pattern or the two lenses required for stereo work cannot be fixed on its front board. Most

ADVANTAGE OF A COMBINATION CAMERA



SELWORTHY VILLAGE, SOMERSETSHIRE, ENGLAND

makers now produce a camera that is styled "Combination" to fill the dual purposes.

Stereo photography is a most interesting branch of our hobby, one that certainly deserves more attention and patronage, and this last by a greater number of camera users. With the larger demand which the fascination and beauty of stereoscopy should create, all camera makers should list at least one model in the "Combination" class.

I trust Mr. Clute will consider a few of the prints I am sending, some of each kind, worthy enough for reproduction, and that they will awaken some interest in the mind of readers who may be considering the purchase of a new



SELWORTHY VILLAGE, SOMERSETSHIRE, ENGLAND



CLOVELLY—The retreat of Charles Kingsley, Novelist

camera, to the end that, when a new camera is purchased, one suitable for stereoscopic work, as well as ordinary photography, may be selected. Very soon a number of last year's "tyros" will be considering the purchase of a larger camera for the advancing season, and I hope that my advice will be acted upon and that my appeal may not be in vain.



CLOVELLY—The retreat of Charles Kingsley, Novelist

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—

THE EDITOR.

KEEPING PRINTS FROM CURLING: I do not suppose it is the right way, and perhaps it is not the best way, but I find that immersing my prints in the old familiar solution used for the old-style curling films will cause them to remain quite flat and give little or no trouble from curling. The solution is made by adding one-fourth ounce of glycerine to sixteen ounces of water. The prints should remain in the solution for about five minutes, then blotted off and dried as usual.—W. B. H., Minnesota.

DARK OR BLACK BACKGROUNDS: I have, this last fall, been using a hint given in an old issue of *CAMERA CRAFT* with the most gratifying results. It is simply to use the interior of a darkened room as a background by posing the sitter or subject in the door thereof. In my case the darkened room is the combined barn and carriage shed back of our residence, which opens with two large doors. The clear space just inside the door is an ideal place to pose my friends and neighbors; and, the location being more or less away from interruption, is much more suitable than the front porch, which I had heretofore used. In addition to all this, I find that by opening more or less the two large doors I can secure a wide variety of lightings, some of them as satisfactory as one could wish. By darkening the two small windows on the inside of the large room I find that the jumble of usual barn contents does not show in the negative at all, the background coming out practically black or just enough off that color to avoid a silhouette effect. Of course, anything quite white would result in an image, particularly if both doors are wide open; but if one does have such an object that cannot be removed, it is an easy matter to cover it with a piece of old carpet or something of a dark color.—R. D. Byerly, Illinois.

PHOTOGRAPHIC SILVERWARE: Recently, in the course of my regular work, I was called upon to make a picture of some silver cups, three of them highly polished and all finely engraved. Do all I could, their brilliant sides reflected everything within the room, so that these reflections came out much more strongly than did the engraving. The first picture shown herewith is a good sample from one of the negatives made in the usual way. Then I tried filling them with water and inserting a piece of ice. A very fine dew of con-



densation at once formed on their outer surface and permitted of the photograph shown last herewith being made. The work has to be done at just the right moment; in fact, the condensation on the sides of the cups became so great that it started to run just as the shutter was closed completing the exposure. It is perhaps true that the troublesome reflections could be avoided by erecting a shelter of tissue paper about the articles and pointing the lens through a dead black screen; but having tried that plan with a like subject in the past, I was not much pleased with the results, because the entire absence of reflection did not give the effect of mirror-like surface that the cups presented.

—W. A. Scott, California.





CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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San Francisco, California, February, 1913

No. 2

Consistency, Thou Art a Jewel

A few months ago the original writer of a certain article called the attention of the editor of our Philadelphia contemporary to the fact that his article had been copied almost word for word by a Philadelphia writer, sent to us, accepted and published over the name of the sender. The Philadelphia editor thereupon woke up, drew from us a personal letter on the subject, and then used space in his publication to give our letter unexpected publicity and to upbraid us for failing to recognize what he himself, the original publisher of the article, had failed to recognize until his attention was called thereto. Should there, by any possibility, be numbered among our readers any who might imagine this burst of righteous indignation on the part of this Philadelphia editor to be evidence of his obsession of editorial wisdom and consistency, we would ask that they compare the leading editorial in his November issue with the opening Chapter of *Photo-Miniature* No. 42. By careful comparison they will find that only an occasional word has been changed, possibly through fear of destroying the sense entirely were more attempted. We have never disputed the right of our Philadelphia contemporary to fill its pages with clippings from other magazines, or even with serial reprint of books that have long ago run through several editions; but we do contend that the few editorial pages in any magazine, even this Philadelphia production, should be original matter, assuming, of course, that the editor be capable of writing such. More particularly does this seem important when the unfortunate "Editor" is so ready to upbraid us by calling attention to the surprising fact that some one has really found, some years ago, something in the pages of his magazine that seemed worthy of publication in our pages when presented to us as original.

Is It The Price?

Entirely too many commercial photographers have a mistaken idea that the price of their work has been hammered down, and that there is no longer any chance for a decent living in their line. In this they are more or less mistaken. True, customers quite often raise the question of price, and in some cases go so far as to quote prices made by others; but much of this is simply due to the natural tendency to use that method of satisfying one's self that he is not being asked to pay a higher price than the next man. Often it is the result of the photographer's own undecided manner of seemingly guessing at what he should charge. Ask one of these men a plain question as to what he will charge for making such and such negatives and supplying so many prints, and his reply

will give you little confidence in the price being a fixed one. True, conditions vary, and it may be impossible to state a definite price that will give the same profit on all like work. Where such conditions maintain it would seem a not very difficult matter to accept the work on the basis of time consumed plus a certain per cent for profit. But to show that price is really not the question in a large number of cases, let me mention two instances that came under my observation just recently. A friend, owner of a cigar stand, wanted a picture of his place. I recommended an ambitious young worker, and the picture was made. The cigar man did not like it, and complained to me that he did not think the photographer was more than an amateur, as he had only charged him seventy-five cents for taking the trip, making an 8x10 negative and delivering a print. The print was really a very good one, but the customer had in mind a half-tone he had seen of another shop, one made from a highly retouched print. Another case: Another friend wanted an interior. I recommended a photographer, and he made the negative five days later than he promised, and delivered the print two days later than specified in his second promise covering that part of the work. Another complaint. The photographer I had recommended was evidently a cheap man, judging from his price, and the fact that he did not have the time to do work promptly. My friend complained that he would gladly pay three times as much if he could only get hold of a man who would give his work attention when promised, so that waiting for it would not upset all his arrangements as to cuts for the printer handling his advertising matter. Read over the article by Mr. Smith in the last issue; ask yourself if he would handle an order in this way. Or would Mr. Feather, whose helpful article appeared in the July issue? Both are commercial photographers, and neither of them find reason to complain as to prices and the lack of paying business. The matter is really worthy of some thought unincumbered by the idea that every customer of the commercial photographer knows the lowest obtainable price and is willing to pay it only.

An Unusual Order

Curtis & Miller, the well-known photographers of Seattle, are filling an order for seventy-five transparencies, three and one-half by five feet in size, to be used for advertising purposes by a real estate firm of Vancouver, British Columbia. The plates are being coated by the G. Cramer Dry Plate Company, plate glass being used, and we understand they cost three hundred dollars per dozen. The express charges on the first dozen sent from St. Louis were eighty dollars. The finished transparencies will be put on exhibition in the principal cities of the United States, to create interest in the land offered for sale by the firm having them made.

Behind every trade and occupation there are the most intimate human connections; beneath every trade and occupation there are deep human relations; and it is only as we discern these fundamental relations and connections that we get at a true conception of the magnitude of the practical activities of society and of their significance in civilization.—HAMILTON WRIGHT MABIE.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Home-Made Mounting Paper

Probably no point in the exhibition of prints is more important than the preservation of good tonality between the print and the paper or frame in which it is mounted. It is surprising what an enormous change can be effected in the appearance of a photograph by a small modification in tint or change in the depth of tone. Although a large variety of mounting papers are available, yet there are few that are capable of keeping a sufficient stock for experimental work.

Moreover, the colors of papers are constantly changing so that what is available one day is not obtainable the next, and the man who does large exhibition work or is anxious to make the best of his home material, will find it better to prepare sufficient paper.

Mr. Wm. Smoker, writing in *Photography*, gives the following details, which are found easily workable:

The paper used should be a good quality of white blotting paper, thin or thick, rough or smooth, according to the character of the mount required. The paper should be cut up into pieces a little larger than required, avoiding paper containing conspicuous impurities, but watermarks may be disregarded.

The blotting paper has now to be sized and stained, the most useful colors being shades of brown and grey. A brown stain which will produce a paper with a very pleasing velvety surface, and will give a wide range of tones, is the following:

Vandyke brown (ground in water) 1 ounce
Washing soda 2 drams
Gelatine (Nelson's No. 1) ½ dram
Water to 10 ounces
The gelatine is put into an ounce of cold water, and is allowed to swell for one hour, and is then dissolved by gentle heat. This is added to the other solid ingredients in a jar or wide-mouth bottle, and then the remaining nine ounces of water, hot, are added. The whole is thoroughly mixed up and

strained through a piece of muslin. When cool it is ready for use. This stain forms the stock solution, and will produce a rich brown as dark as ordinarily will be required.

To produce a whole series of tones we can proceed as follows: The stain is poured into a shallow dish, a little larger than the paper to be tinted—a developing dish, or even a tea tray will do. The blotting paper is then gently lowered by two opposite corners on to the surface of the liquid and allowed to float thereon, taking care to avoid air bells. If the paper is of a thick character, such as the Asoka brand, it is best to immerse it entirely. The action of floating or immersion should be continuous or ridges may be formed. The paper is then lifted up and drawn over the edge of the dish or a glass rod to remove the superfluous liquid.

Some sheets of ordinary newspaper should have been got ready beforehand, each a little larger than the stained paper. The latter is placed between two of these, and the upper one is gently stroked. This surface-dries the blotting paper effectively, and it is then transferred to another piece of newspaper and put aside.

The stain is to be poured back into a bottle or jug and well stirred, when it may be poured out again and a fresh piece of paper stained as before.

When a sufficient quantity of paper has been stained in this way to one depth of color, an equal quantity of water may be added to what is left of the stain. The solution will then give sheets of a slightly lighter tone; and after as many of these have been done as are needed, the liquid may be again diluted in the same way to produce a tint of still less depth. The stock solution of the stain will bear lightening in this way some four or five times, when a light buff color will be the final result.

Batches of mounting papers can be made in this way, each subsequent batch being a shade

lighter than the previous one, yet the color of all being identical. These will be found very useful in multiple mounting.

If a warmer brown is desired than that which is given by the above-mentioned formula, it can be obtained by taking half an ounce of burnt sienna and half an ounce of Vandyke brown to make the stain.

Reeves' tubes of moist water colors will be found to make splendid stains. A tube of crimson lake and one of olive green, combined in various proportions, will give a whole range of browns suitable for making the stock solution as just described.

Light grey tones can be obtained by a slight modification of the procedure. The following solution should be made up:

Reeves fixed Indian ink....40 drops
Washington soda $\frac{1}{2}$ dram
Water to $1\frac{1}{2}$ ounces

In this the blotting paper should be completely immersed, and, after staining, it should be transferred to a dish of clean cold water. It must be given several changes of water, and may then be hung up to dry. To produce lighter tones, water should be added to the solution given above.

When the papers prepared in this way are partially dry, they may be pinned up like prints and dried thoroughly. If they are stored under pressure they will be kept perfectly flat. Before staining any quantity of the paper, it is well to make a test piece first, as in drying the papers become much lighter in tone.

Tones On Sepia Bromides

Some time ago the Reverend F. C. Lambert published in the *Amateur Photographer* the following account of experiments on toning, which I have since repeated and am able to confirm. They are of practical importance. He writes: I was supplied with a number of identically exposed, developed, and well-washed bromide prints from the same negative. These were cut up into strips, and bleached in various baths, well washed, and then all darkened in a two-drops-per-ounce bath of ammonium sulphide, a fresh darkening bath being used for each strip. Darkening was allowed plenty of time, that is, until no further color change could be detected.

Now, what was the result in *brevissimo*? Simply this: Different bleaching baths gave different results as regards final color. This could not be wholly due to hypo in the orig-

inal print, for I used strips from the same print in different baths; nor could it be due to hypo in the sulphiding bath, for the same sulphiding agent was used in all the cases of this series. It is true that the differences of color are not very startling, but they are quite enough to be useful. Unfortunately, there is no convenient way of referring to associated colors and shades beyond such words as warm, cool, more or less brown, yellow, etc. Therefore the only thing for the reader to do is to repeat the experiments for himself, so that then a particular shade of brown, as we may for the moment roughly term the whole series, may be produced. In all cases it is to be understood that a two-ounce bath contained the various ingredients here below given.

AA: Potassium ferricyanide, five grains; ammonia .880, fifteen minutes. A fairly quick-acting bleacher. Final result: a very pleasant, cool (non-yellow) brown, reminding one of the early days of sepia platino-type. The simplicity of this bath is also a point in its favor.

BB: Potassium ferricyanide, five grains; potassium bromide, fifteen grains. Not quite so quick acting as the last named. Final result: a warm brown, but free from any yellow tendency; a decidedly rich color that would suit child portraiture, also some architectural pictures and rocky scenery. As most photographers keep both these agents on their shelves, it calls for no side wanderings.

CC: Potassium ferricyanide, five grains; potassium iodide, ten grains. Rather slow acting. Final result: very close to BB, but perhaps a trifle lighter, and a suspicion towards yellowness. The difference between BB and CC is very slight, and the former is, in my opinion, the better. Moreover, potassium iodide is much higher in cost than the bromide salt, a strong argument in the latter's favor, other things remaining the same.

EE1: "Chloride of lime" or "bleaching powder," thirty grains; common or potash alum, twenty grains. The actual composition of so-called chloride of lime is variable, but on solution it yields calcium chloride, hypochlorite and hydroxide. In the presence of alum probably chlorine is set free. The final result, which interests most of us much more than guesses at chemistry, is again a cool but very pleasant sepia brown, compar-

A PHOTOGRAPHIC DIGEST

ing closely with A A. In making up this and the two following baths a considerable proportion of the bleaching powder is not dissolved, but should be removed by running the milky mixture through a bit of cotton wool in the throat of a funnel.

EE2: Bleaching powder as before, plus two grains of chrome alum. Result very similar to EE1, but perhaps a suspicion more yellow.

EE3: Saturated solution of potash alum, one ounce; saturated with solution "chloride of lime," one ounce. Result rather warmer than the other two, but all these three are near enough to be called practically identical.

GG: Potassium bichromate, twelve grains; sodium chloride, table salt, sixty grains; sulphuric acid; twenty minutes. Result: a good cool sepia brown, without definite suggestion of redness or yellowness. Compares with A A or EE1.

HH: Potassium bichromate, twelve grains; potassium bromide, twenty grains; nitric acid, six minutes. Not very different from GG, but yet certainly warmer. This is more noticeable in the lighter tones, clouds, etc., than the darker foreground parts. Both these baths are worth noting.

Our next experiments were with copper.

K1: Copper sulphate, ten grains; potassium bromide, ten grains; sulphuric acid, five minutes.

K2: Copper sulphate, ten grains; sodium chloride, ten grains; hydrochloric acid, five minutes. Final results with both, warm brown, showing a negligible difference. There is a slight tendency to a general creamy staining of the paper.

All things considered, copper is not a very promising agent, and cannot be recommended on any grounds. Numerous other combinations for bleaching were tried, but of these perhaps one need only mention one of the oldest, perhaps the original of the entire family, and experimented on by myself and others in the early days of the old Camera Club, where results were shown.

In a twenty grain per ounce solution of potassium iodide add flake iodine to give a deep port-wine color. For use, dilute this to a straw color. The print bleaches, that is, the image turns a yellowish tinge, but the paper is turned a dark blue, so that the general effect is that of a negative at first glance. The print is now washed in run-

ning water, and when immersed in the sulphiding solution the blue color is discharged, and the image turned brown in the usual way. With ammonium sulphide the color is close to that of A A.

In connection with these experiments it is well to note a formula by T. H. Greenall, who, writing last February in *Photography*, stated: It is well known that warmer, or colder shades may be got by varying the bleaching solution; and experiments in this direction were made. I find that a bleacher containing sodium phosphate (hydrogen disodium phosphate) acts slowly and regularly, and leaves a strong brown image, which sulphides to a much cooler shade than if the print had been bleached with the usual bromide and ferricyanide solution.

Such a phosphate bath which will be found to work very satisfactorily may be made up as follows:

Sodium phosphate200 grains

Potassium ferricyanide.... 40 grains

Water 4 ounces

Thus then, by using amidol as the original developer of the print, and bleaching with this phosphate formula, a picture of a cool shade may be got by simple sulphiding with sodium sulphide.

I prefer this method of getting cool shades to the plan of bleaching the print and then darkening it by a combination of re-development and sulphiding.

After bleaching the print in the phosphate bath it may be washed before sulphiding for a long time without there being any perceptible loss of detail. I have had test pieces washing for as long as forty minutes, but in practice, of course, two or three changes of water occupying about a minute are all that are needed. Sulphiding the phosphate bleached print with ammonium sulphide instead of with sodium sulphide makes no difference in the color of the result. The phosphate bleacher of the formula given above gives very pure whites.

Magnesium Ribbon

"A burnt child dreads the fire," and most photographers have met with clients who have firmly tabooed any attempts to use a flashlight, even when no explosive mixture is used. In such cases it is usually quite possible to get permission to employ magnesium ribbon, and this if properly handled will usually give results quite equal to the

quick-burning powders. It is only necessary to observe two or three points to insure success. In the first place the ribbon must be perfectly bright and free from oxidation, this condition being readily obtained by passing the metal strip once or twice between a fold of fine sandpaper held by the thumb and finger. In the next place, the metal should never be burned in a single strand, three or four strands should be loosely plaited together and secured at every two or three inches with a turn of fine flower wire, then if one strand goes out the others will relight it. The exposure is also shortened and thereby finished before any smoke has had time to drift into the field; four strands each six inches long will burn in less time than one strand two feet long, and yet give the same exposure. Thirdly, one should provide a good pair of pliers or a small hand vice for holding the ribbon while burning, and a piece of old carpet to catch the hot ash. If the carpet is of fair size, it permits of the ribbon being turned about during combustion. This prevents the sharp shadows so often seen in flashlight pictures. If much work has to be done, a sort of tin Dutch oven may be used, with a fixed clip for the ribbon and a tray for the ash, the back serving as a reflector and protecting the operator's eyes.—*British Journal of Photography*.

The Instantaneous Development of Films and Plates

To develop a roll of films in the time required to draw it once through a basin of developer might seem an insane proposition if it were fathered by any one less trustworthy and eminent than A. J. Mortimer, the well-known editor of the *Amateur Photographer*; yet this is what he not only seriously proposes, but informs us that he has practiced for some time. Mr. Mortimer, as is well known, is an expert in that most difficult and technical field, marine photography, and his advocacy of any method of development must necessarily include a consideration character gradation, a matter of importance in marine photography. We therefore feel assured in placing confidence in any method that he may seriously advocate. Mr. Mortimer bases his practice upon the work of A. J. Watkins in the matter of time development and argues that if the time of development may be indefinitely extended by the dilution of the developer and yet pre-

serve gradation, it may be indefinitely shortened by the concentration of the developer with an equal maintenance of gradation; and he finds that practice corroborates this theory. He recognizes no limit to the rapidity of development except those imposed by the physical restrictions of concentration of the solution and the expertness of the worker in handling the plates. In a recent issue of the *Amateur Photographer*, the method of handling spool films is dealt with in detail. In the following number the working of plates is described. The advantages of the method cannot be better stated than in the words of the author. He writes as follows:

"As a beginning, do not use the fully concentrated solution. Be content to develop the exposure in, say, half a minute. Dilute the developer one part in six of water. First, if a spool film is being treated, run it through a dish of plain water, seesaw fashion, for a minute, until it is thoroughly wetted. Pass the fingers over the surface to remove any small air bells. Have the developer in a deep dish, which need not be much wider than the width of the film—this for economy of the developer. Hold the end of the film between the finger and thumb of the right hand. Let the film hang straight down, and take the other end between the fingers and thumb of the left hand. Plunge the lower end into the solution and gradually draw it through and up, at the same time lowering the right hand holding the other end. Continue the action, drawing the film through the developer in a U-shaped loop, until the fingers of the right hand holding the other end of the film are in the solution and the left hand is uppermost, holding the film straight down again. This is, of course, the usual method of dealing with films which are not developed in a tank. In this case, however, the tiring monotony of see-sawing the film up and down for, say, ten minutes in a normal developer is avoided. By using the formula as given, one in six, the negatives will be fully developed in half a minute. Reduce the dilution to one in three, and fifteen seconds will suffice.

"When sufficient dexterity is gained, the film can be completely submerged, passed regularly through the strong solution and back again, while slowly counting one—two—three—four. The image literally flashes out as the surface of the film comes into

A PHOTOGRAPHIC DIGEST

contact with the solution, and within the time mentioned is developed through to the back. A slight pause is, perhaps, advisable as the right-hand end comes to the developer, to compensate for the double passage through the liquid of the rest of the film; otherwise, a steady, unwavering action is best. The film can then be passed straight into a strong acid fixing-bath: Hypo, six ounces; metabisulphite of potash, one-half ounce; water, twenty ounces. When fixed, the film is washed and dried as usual.

"It will be clear that for the worker with larger and longer spools of film the concentrated solution will have to be diluted somewhat to allow time for the actual passage of the film through the developer. The amount of dilution is, however, regulated entirely by the dexterity of the worker. If he can pass, say, a ten-exposure post card spool into the developer (being more diluted, a larger quantity and a bigger dish can be used), unroll it under the solution from one side of the dish to the other and back again twice in one minute, the developer can be used diluted with about ten times its bulk of water."

Of the developers suggested for use, the first is undiluted rodinal; the second, adurol, formula being as follows: Hot water, ten ounces; sulphite of soda, four ounces; carbonate of potash, three ounces; and, when dissolved, add adurol, one-half ounce. The third is a metol-hydroquinone solution made as follows: Hot water, ten ounces; sodium sulphite, four ounces; metol, one hundred grains; sodium hydrate, two hundred grains.

The method of development is to first thoroughly wet the plate or film and then pass it rapidly through the concentrated solution, backwards and forwards, until five seconds have been counted, then passing it immediately into an acid hypo bath. As the matter is so important, I give Mr. Mortimer's own directions:

"It may be asked at this juncture, What are the advantages of the process? Apart from the actual fact that a most remarkable saving of time is effected in development, with no falling off in quality, one has only to experience the task of dealing with a great number of small films to appreciate its value. When the amateur realizes that he can fully develop a dozen Vest Pocket Kodak Ensignette or other small-camera spools in less

than a quarter of an hour, giving each individual treatment; when the trade worker, with the monotonous round of spools and plates day after day, finds that a day's development can be accomplished in an hour or two; when the press photographer, to whom every instant is valuable, can have his fully developed negatives within a minute of rushing into the dark-room—then a few of the advantages will be seen.

"For the worker who has stood for many weary hours developing films until his arms ache, and who cannot afford a series of developing tanks, the method should be hailed with delight. The only disadvantage that is likely to be set off against the advantages is the question of cost. The developer being used in an undiluted form is likely to be more wasteful, but if care is taken and the developing dish is stood inside a larger one, so that all overflow can be poured back again, it is surprising how long two or three ounces of developer will last. It appears to keep better in its concentrated form, and can be used over and over again until it is the color of stout, and visibly loses its potency. A plan that has been adopted with success is to pour the used developer back into the stock-bottle for future use."

So far as gradation is concerned, Mr. Mortimer shows by actinometer-made test prints that two identical exposures, one developed with concentrated development in five seconds and the other with the usual diluted developer in five minutes, give identical prints. I have tried the method with plates and am entirely satisfied with results. We have here a boon to many workers.

Treatment of Over-Exposure

Frederic H. Evans, the well-known master in architectural photography, writing on this subject in *Amateur Photographer*, says as follows:

But if we are certain beforehand that we have over-exposed our plate, it is quite easy to make it render a normally exposed effect. A case in point occurred to me only recently. I was about to expose on a subject, and, for convenience in exposing, as a color screen was in use, the lens was stopped down to f-32. But, just before exposing, a sudden doubt as to part of the composition disturbed me, and I removed the dark slide and replaced the focusing screen after opening the lens out to the full, only to find that every-

thing was all right after all. But, in replacing the dark slide, I forgot to alter the lens diaphragm back to f-32, and as it had been opened out to between f-6 and f-8 the exposure I gave for f-32 was, of course, over sixteen times in excess. As I had not another plate to spare for a comparative or correct exposure, I was careful to pack this over-exposed plate in a specially marked envelope, for special development. This was, of course, the old-time remedy of a preliminary soaking in a ten per cent. solution of bromide of potassium for a few minutes, then a slight rinse under the spray, and then development in a restrained ordinary developer, a developer which for normal exposures needs no restrainer.

Development was, naturally, slow; and at the end—and it is well to fully develop—the image was so buried as to appear both over-exposed and over-developed; but, on fixing being complete, it turned out to be a negative perfect in all its gradations with easy printing quality all over, including the sky, no faking or working on the negative being at all necessary.

The moral of this is that, when in doubt as to what exposure to give, and when under or bare exposure would be fatal to the effect desired, if we deliberately give, say, ten times the exposure we have carefully worked out as likely to be correct, and then develop in the way detailed above, we shall have the result we wanted, and thus prove that we have at will a plate that is immune to over-exposure when within reasonable or likely limits, and this without radical change in our accustomed developer and no undue loss of time in greatly protracted development.

The Flashlight In Autochrome Work

The use of the flashlight as a means of obtaining rapid exposures of autochrome and other screen color plates is increasing in practice and we have recently had the opportunity of seeing very beautiful results in this city. Autochrome photographs of children too young to remain still for the usual exposure time, have been taken with perfect sharpness of detail and truth of color rendering. Necessarily the powder to be used for autochrome work has to be specially adapted thereto and requires a special filter for the correction of its color values. Flashlight powders and filters are now manufactured

by the makers of the plates as well as by others. To those who may feel inclined to make their own material, the following directions may prove useful: Take of finely powdered thorium nitrate ten parts; magnesia powder, ten parts, and mix carefully, without friction, just before use. Of this powder, use twenty-five times as much for autochromes as would be required in regular exposures. The light filter for the proper correction is made by coloring one hundred and twenty cubic centimeters of a six per cent gelatine solution with twelve cubic centimeters of a one per cent solution of Filter Yellow K to which twelve cubic centimeters of water have been added. In coating plates with this solution, allow eight cubic centimeters to each 4x5 screen, using optically parallel glass.

Variable Focus

The present day frequent use of the mercury vapour electric light and of other forms of electric light that are specially rich in the ultra-violet radiations has proved a great convenience to many who have occasion to photograph at night, snapshot or instantaneous exposures in the evening thus becoming practicable or even easy. Several persons have, however, complained that their rapid lenses define badly when used with these modern sources of intensely active photographic light. The explanation is simple: no lens has precisely the same focus for all kinds of light, and the methods of achromatising and apochromatising are only partial remedies for this fundamental defect of the lens. To obtain the best average focus with a source of light that is rich in ultra-violet, it is well to specially adjust a focussing screen for this class of work, the *modus operandi* being as follows: Numbered cards are mounted on a lathe, so as to be at even distances one behind the other, like the risers of a staircase, half-inch distance between card and card being convenient in ordinary cases. The middle card is sharply focussed, and a photograph is taken by the light in question. It is probable that another card will show the maximum of sharpness, and the next step is to so adjust the ground glass in the new focussing screen that the card which photographed with a maximum of sharpness shall also show on the screen with a maximum of sharpness.—*Amateur Photography.*

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Local Intensification

While I would not care to say it was the best way without actual trial and comparison with the results from a good one-solution intensifier, there is an expert photographer of my acquaintance who secures the best of results by employing the ordinary mercuric bleach of the mercury process for all his local intensification, and he does a great deal of such work on many of his negatives. His procedure is to take a few drops of the saturated solution of bichloride of mercury and mix it thoroughly with about the same amount of glycerine. This he applies carefully, using a small brush or even the point of a wooden toothpick when the part is quite small, applying it to the dry negative. When the desired bleaching has resulted the negative is well washed and immersed in diluted liquid ammonia. Some care is required in mixing the mercuric solution and the glycerine, a sheet of glass and a small glass stirring rod being the best, the mercury having a tendency to attack metal, making the use of a palette knife inadvisable.

Argentometer or Hydrometer

A correspondent in Kansas wants to know what an argentometer is, and what it is used for. There is considerable confusion to be explained away in this matter of argentometers and hydrometers. The old wet plate workers had use for an argentometer, which is an instrument on the same principle as a hydrometer, but with a scale showing the number of grains of silver per ounce of solution, instead of the specific gravity of the solution. In some way these became known as hydrometers, and are regularly sold as such by photographic dealers in this country today, having survived to be used for determining the strength of other photographic solutions according to an arbitrary standard based on the scale which they carry. When an American formula calls for a solution of sodium sulphite testing 40, or a solution of forty hydrometer test, it is quite likely that

it means a solution that tests forty by the argentometer, wrongly called a hydrometer, which is somewhat of a different character. Some months ago a British publication reprinted one of our articles in which the writer used the accepted phraseology in this country, only to call forth considerable correspondence from its readers who were led astray not knowing of the error that maintains and is so universally accepted in this country. Our correspondent has perhaps run across the correct name in the writings of some author who desires to be exact without appreciating that his exactness needs an explanation on account of the universal and long acceptance of the inexact name.

Dichroic Fog

The above is the name for that metallic-like surface fog that is sometimes produced during the developing or fixing of plates that are somewhat stale, which, I suppose, is what my Minnesota correspondent has in mind. About the best method of removing it is to oxidize the silver which causes it with a neutral solution of permanganate of potassium, about one part of the salt in a thousand parts of water, and then use a solution of sodium bisulphite, the strength of the solution not being important. Rubbing with alcohol will sometimes remove these stains, but the rubbing is liable to alter the gradation of the image. A three per cent acid solution of ammonium persulphate, followed by sodium bisulphite solution, will also remove the stains, but it is liable to reduce the image as well. The first is perhaps the most advisable treatment.

A Photographic Barometer

An amateur friend has been pleasing numbers of his acquaintances by presenting them with what he calls his "Barometrical Boy." This is a bromide print made from a negative of his son dressed in a light colored sailor suit. The method of procedure is as follows: The print is first hardened in a

formaline bath, one in twenty, and then that part representing the boy's clothing is given a coating of gelatine solution, about one part gelatine in twenty-five of water, to which is added thirty grains of chloride of cobalt and twenty drops of glycerine. The result is that the clothing of the boy appears blue in fair weather and pink in damp, due to the well-known action of moisture on cobalt salts.

Copying a Faded Print

A commercial acquaintance recently attempted to copy an old and faded albumen print with such poor results that he became much worried over the matter, making negative after negative only to become more and more discouraged. Finally, taking it to another worker who was supposed to be up in orthochromatic photography, he received the desired suggestion that set him right. The advice was that the case was really one that did not involve the use of a color-sensitive plate and filter because there was no color—merely fading. What was needed was a plain plate and a filter, if any, that was of a light blue color. This was tried with surprisingly good results. Where our acquaintance had gone wrong was in trying to copy the faded photograph by the same method as used to secure good copies of old and discolored ones.

Photographing On Wood

If our Illinois correspondent wishes to make photographs on wood the most practical way will be to use double transfer carbon tissue. There is also an easy method of transferring ordinary prints to wood by coating the surface with a varnish, and when the latter becomes "tacky," transferring the picture thereto, removing the paper afterwards by the application of a solution of formaline of a strength that will cause the image-bearing film to separate therefrom. However, the making of photographs on wood, as used by the wood engravers, is as follows: The surface of the block is first coated with a solution of one part of gelatine in twenty-five parts of water, to which has been added enough zinc white to prevent the wood showing through the coating. When this is dry it is brushed over with a ten per cent solution of common table salt. Again dry, it is sensitized with a ten per cent solution of silver nitrate, applied in the dark-room with a mop made of wrapping a strip of cotton flannel around a piece of

glass. A weak image is printed under a negative and developed with:

Metol	6 grains
Acetic acid	120 minims
Water	14 ounces

When the desired density is obtained the block is rinsed and fixed. It is the practice to coat the sides and bottom of the wood block with wax in order to prevent it absorbing the fixing bath and the water used in washing. The image is, of course, reversed when the block is engraved and printed, but this can be avoided by making a reversed negative from which to print on the sensitized block.

Eau De Javelle

In reply to a correspondent in New York, this is the name of a solution that can be obtained of druggists but which he can make up for himself by dissolving, by agitation, one ounce of chloride of lime in fifteen ounces of water, then dissolving two ounces of carbonate of potash, and finally adding five more ounces of water. It is used for eliminating the last traces of hypo from films and plates and also, by longer immersion, for reduction of the image.

Developer For Stale Films

In reply to our Ohio correspondent, a local worker has had most gratifying results, after disappointing ones with usual methods, by developing with the following formula, which is of English origin:

Boiling water	20 ounces
Hydroquinone	120 grains
Metol	60 grains
Sodium sulphite	2 ounces
Sodium carbonate	3 ounces
Potassium bromide	60 grains

This should be mixed up in the order as given above and used undiluted, following development with an acid fixing bath.

Notes from the Illinois College

A number of the students and faculty attended the National Convention at Philadelphia and reported a grand Convention.

Alexander Nicholoff, who recently finished his course here, has opened a studio in Rochester, New York. He will do all of his operating by flashlight.

With regret we report the death last month of William H. Hartman, student of 1907, and Mrs. J. H. Walker, formerly Miss Sadorus, student of 1899.

OUR BOOK SHELVES

"Photographic Secrets"

As the author says in his notice to the purchaser, his aim has been to make a valuable book, not a large one. Measured by the amount of paper and printing, the book is worth about ten cents, but, measured by the value of the information, the "stunts" it contains, it is worth many dollars to the worker, particularly the professional or commercial man who wishes to facilitate and better his work. The amateur, of course, will buy the book, and he will not be disappointed in its contents even if there are a few of the "stunts," such as the ones on double printing, vignetting, retouching, and the like, that will not have the same everyday application for him. The price is one dollar and it is sent postpaid by the publisher, Evan Jenkins, Box 715, Seattle, Washington.

"Penrose's Pictorial Annual"

The new volume, the eighteenth, of this handsome process year book, will, as heretofore, contain a full and complete annual retrospect of illustrated printing and allied arts. It will contain seven four-color, thirty-two three-color, forty two-color and one hundred monochrome supplements, in addition to a number of litho offsets in monochrome and colors; the total number of illustrations numbering nearly five hundred. The literary contents occupy over half that number of pages, containing about seventy-five authoritative articles on a wide range of subjects that appeal to every individual interested in graphic art and particularly to those interested even indirectly in reproductions by the many processes in use today. It is published by A. W. Penrose & Company, Limited, 109 Farrington Road, London, E. C., England.

It will be sent, express prepaid, for three dollars by the American agents, Tennant & Ward, 103 Park Avenue, New York. The local agents, Hirsch & Kaiser, will have a supply and fill orders while it lasts.

"Herself"

This book has a sub-title, "Talks With Women Concerning Themselves," and the famous author, Doctor E. B. Lowry, lives up to it in the same most helpful and wholesome manner that characterizes his other works. The book, containing as it does, trustworthy and straightforward information that is of the greatest and most vital helpfulness to all women, is one that should be the valued counselor of every woman. Doctor Lowry's books have received the endorsement of the leading medical, educational and religious authorities and publications, and in addition to their great value in the elevation of the race they are particularly timely in filling the requirements of the present world movement for sex education. The book is neatly bound in cloth, 12 mo., price, one dollar net; one dollar and ten cents postpaid. Published by Forbes & Company, 443 South Dearborn Street, Chicago, Illinois.

"Himself"

This, "Talks With Men Concerning Themselves," is uniform with the above, equally notable for its simple and direct combination of purity, scientific accuracy and medical knowledge. It is by Doctor E. B. Lowry and Doctor Richard J. Lambert, two authors who bring to their rather trying task that freedom from morbid or mawkish tendencies that makes their work so well designed to serve the important purpose for which it is intended. As the *Journal of Education* so clearly states the case: "Dr. Lowry's books combine medical knowledge, simplicity and purity in an unprecedented way. They are chaste and void of offense to the most delicate natures. The volumes are written with scientific accuracy and clearness." Neatly bound in cloth, 12 mo., price one dollar net; postpaid, one dollar and ten cents. Published by Forbes & Company, 443 Dearborn Street, Chicago, Illinois.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

What the I. P. A. Has Done For Me

By Sigismund Blumann. I. P. A. 2323.

When first my name appeared as a new member in CAMERA CRAFT, there seemed very little that the I. P. A. could do for me, and 'a very great deal that I could and would do for its members. Not even the number 2323 (twice 23 you observe) suggested modesty. Things were going to move with aggressive forwardness. Photography over the continent was to be advanced, and I had arrived. Ten letters a day and a half dozen of my best prints in each. I drenched the land in pictures. That first month the envelopes gave out, and the dealer in photo supplies thought me the busiest professional in these parts. In due course replies came, and when I took stock, sad to say, the percentage of members who failed to take cognizance of my existence was about fifty to the one hundred. Of the answers, a good proportion returned my prints, and yet, even at that, I found myself with a mighty fine collection from all over the country.

And now comes the humiliating confession. The most of these prints were so much better than I could hope to make as to chasten me. And the best workers wrote the nicest, kindest, most helpful letters. There was nothing aggressive about them. They were not trying to advance me, but instead, seemed to be receiving and sending out prints in the sheer enjoyment of the thing itself. Here was a new viewpoint. Men and women who had attained to a high standard, who made real pictures, who seemed to know or feel all the points of tones, shades, gradations, planes, composition, etc., and didn't talk about them, not at all. They had so little to say and were so sincere in a desire to give pleasure, that, having taken stock of the returns I now took stock of myself. I am a better man today.

Since then I send out fewer prints and handle more of them, probably, than any member of the I. P. A., for on discovering

how splendid the work of amateurs may be and how little I belonged to the Class A. number 1, it became my ambition to be a sort of Photographic Boswell to these John-sons. It is now my self-appointed task to bring together the best workers, to devise new means of putting and keeping them in touch with one another. I have made collections and sent them on the road to be admired as they deserved. I have made albums, portfolios, etc., and routed them far and near. Letters to places over the seas have brought prints from men of international reputation, and these prints are traveling all over the land most of the time. Hours of time, reams of paper, dollars of postage have gone into the work. Much has been expended; and, it is time once more to take stock. I number over a score of the best members of the I. P. A. among my best friends. They write the most cordial letters, and present me with prints, the value of which I am unable to return in kind. And I am accepted in a company of workers among whom I feel proud to find myself. I have had a barrel of fun corresponding with them. There has been the good feeling of having done something and of doing. The work, pleasant in itself, has brought me what my mediocre ability as a photographer could never have succeeded in bringing me.

As time passes—for all the egotistical I's in this paper—I have lost more and more of my identity in the work. It has become an accepted excuse for my not sending out more and better prints, for my not even contributing to the collections on which I am doing, or at least trying to do, my share. The right side of the ledger shows not only a number of good friends, a larger number of interesting correspondents who no doubt will become friends in time—I hope so—a large and fine collection of pictures, a broader knowledge and understanding of the technique and spirit of Amateur Photography, a great pleasure in being and doing something, not

only all these and more, but a development of character that in my middle age I should feel it to be cant to formulate in words.

If my experience has been that of others, as no doubt it has, they will understand. To those who wonder what the object of this may be, let me ask that they throw themselves into great and persistent activity along the same lines, and they will fully comprehend. The I. P. A., like all things mundane, and for aught we know like all things in other worlds, gives out to us no more than is put in. Every return must in some way be earned. My work has brought me double returns, and so shall yours. Let every discouraged member of the I. P. A. impress on his mind that lukewarmness kills worse than a frost. One member complained and threatened to resign because during a membership of nearly a year no one had written to him or sent him a print. And himself had written not one letter nor sent one print. The moral is obvious. Go out and get members in your own neighborhood. Organize little groups and exhibit the state albums when they come. Talk over the separate pictures. Plan ahead. Make the next collection better. Jolt up your State Album Director to greater effort. If there be no director in your state, volunteer to be that one and fill the job. Don't let them bluff or discourage you; keep at it. If your letters fail to bring in one single print get out an album of your own and beg or steal enough prints to make it worth while, then send it along on a chance. Shame 'em. It's a good game.

The first International Portfolio I forced through with most of the prints from my own private collection has brought so many words of commendation and proved so effective that members who received that collection are bidding for the privilege of issuing succeeding numbers. The next three portfolios are already bespoken, and the enthusiastic workers are planning a year and a half ahead. All this for just a collection of prints, neatly mounted and carefully put together. No set form, no binding rules, no comments or criticisms, or data; often without titles. The snowball gathers in weight and size as it rolls. A brother member on the extreme other end of the continent is working along the same lines. I am sure his experiences have been very like mine. I am equally sure he is succeeding as well. Better he couldn't,

because our group are all shoving with might and main, shoulders to the wheel. And we are getting there. Some day you shall hear of us. If we do not dwindle and fade away. A closing confession. I fear nothing more than a period of depression during which inertia shall sound the note of failure. Members dropping out now and then the better than a large membership shilly-shallying. With the help of the mails and a good supply of stationery, it shall be no fault of the writer's if they doze, doze and fall asleep. But this is a remote contingency for, as a fact, the proposition has outgrown one man's control. It is moving of itself.

Go Thou and Do Likewise.

NEW MEMBERS

- 3524—M. R. Carroll, 507 South 10th St., Paducah, Ky.
5x7, developing paper, of view and flash-light work; for the same. Post cards only. Class 1.
- 3525—S. Morales, Box 61, Texas City, Texas. Class 3.
- 3526—H. F. Robinson, Box 415, Albuquerque, N. M.
Class 3, to take advantage of the new International Album.
- 3527—George Braitzinger, Montpelier, Ind.
Post cards. Class 1.
- 3528—John P. Boyd, Montpelier, Ind.
Post cards. Class 1.
- 3529—Peter B. McLean, Box 1174, Winnipeg, Man., Canada.
Willing to exchange anything. Class 1.
- 3530—Mrs. Frederick Lee, Summerland, Cal. ✓
Class 2.
- 3531—George C. Allen, 86 Retreat Ave., Hartford, Conn.
3¼x4¼, 3¼x5½, 4x5 and 5x7, developing papers, of various subjects, landscapes, marines and historical; for scenery, local views and views of historical interest. Class 1.
- 3532—C. A. Robbins, 1009 La Salle St., Belleville, Ill.
Up to 6½x8½, developing papers, of general views, landscapes, odd pictures, etc., pieced panoramas and post cards; for anything of interest, post cards or any other photographs having a general interest at home or foreign. Class 1.
- 3533—Jesse I. Firestone, Judson, Ind.
3½x3½, various papers, of different subjects; for any kind. Post card views only. Class 1.
- 3534—Burr E. Chance, R. F. D. No. 3, Vermonville, Mich.
Class 2.
- 3535—H. W. Miessner, Stewart, Minn.
Class 3.

RENEWALS

- 67—George R. Bosworth, R. F. D. No. 4, Montpelier, Vt.
Post cards, 5x7 and 8x10, developing paper, of landscapes and historic scenes; for something interesting. Class 1.
- 1553X—George P. Morgan, 20 Pontcanna Road, Cardiff, England.
4¼x6¼, 3¼x4¼, stereos and post cards, for prints and post cards of good subjects and technique, can be sure of a reply. The postage on letters and cards alike to England is two cents. Is also prepared to furnish enlargements to any size of Shakespeare's home and district, as well as of pictorial spots that have figured largely in history. Class 1 for good work.

CAMERA CRAFT

- 1572—H. E. Bishop, 1706 College Ave., Indianapolis, Ind.
5x7 and smaller, developing paper, of miscellaneous subjects; for anything of interest. Class 1.
- 1807X—C. J. Christenson, Box 72, Grenola, Kan. Class 2.
- 1921—G. T. Simmons, Laurel, Mont.
6½x8½, developing paper, of landscapes and mountain scenes; for post cards and prints. Class 1.
- 2146X—U. W. Tryon, 327 Sargent St., Kendallville, Ind.
Post cards, 4x6 to 8x10, developing paper, of miscellaneous subjects. Will exchange for anything, historical pictures preferred, any good pictures anywhere; like to correspond and give detail of work. Class 1.
- 2171—Martin Graf, Box 64, Metaline Falls, Wash.
3¼x5½ and to and including 6¼x8½, printing-out papers, of landscapes, buildings, mining subjects, and water scenes; for about the same; first-class work only. Class 1.
- 2220X—H. W. Terhune, St. John, Wash. Class 2.
- 2254—Charles F. Rice, Mamaroneck, N. Y. Class 2.
- 2323—Sigismund Blumann, 3217 Davis St., Fruitvale, Cal.
3¼x5½, 5x7, developing papers, of portraits, pictorial landscapes, for the same. Desire only to exchange with workers who do good work. Class 1.
- 2336—Alfred H. South, 6 East Front St., Media, Pa.
3¼x5½, developing papers, of scenery and general subjects, for the same. Class 1.
- 2353—Ed Bender, St. Anne, Ill.
Post cards, 5x7 and 6¼x8½, developing papers, of inland lake scenes, creeks, farm views, etc. Also lantern slides, for anything of interest. Good work for good work. Class 1.
- 2447—Oscar Ulstad, R. F. D. No. 2, Madison, Minn. Class 2.
- 2482—John W. Kimball, Guard Vt. S. P., Windsor, Vt.
5x7 and post cards, developing papers. I have a good assortment of views of New England scenery, for anything from different parts of the country, Mexico and foreign countries. Prefer prints 5x7 and 3¼x5½ sizes on developing paper with white margin. For good work only. Class 1.
- 2701—W. M. Horsley, 931 Security Bldg., Los Angeles, Cal.
4x6, 5x7, developing papers, of landscapes, marines, flowers and speed work; for nothing but first-class work and send out the same. Post cards only. Class 1.
- 2712X—Edward D. Davison, Munnsville, N. Y. Class 2.
- 2743—Mrs. Elmer E. Robbins, 101 School St., New Bedford, Mass. Class 2.
- 2773—John D. Maloney, Box 56, Missoula, Mont. Class 2.
- 2792—J. R. Young, Box 515, Chico, Cal. Class 2.
- 2803—W. H. Hawkins, 3504 Union Ave., Stock Yard Station, Chicago, Ill.
3¼x5½, 4x5, post cards and prints, of views; for the same. Class 1.
- 2804X—Lemuel Barber, Dysart, Iowa.
Post cards and stereos, of rivers and landscape views; for rivers and mountain scenery. Good work only. Class 1.
- 2942—R. C. Smith, 508 Elm St., Anaconda, Mont.
3¼x5½, developing papers, of camping, hunting, mountains, lakes and snow scenes; for similar subjects, marines and foreign views. Good, clean work only. Class 1.
- 3108—J. Lee Stocking, R. F. D. No. 4, Palmsville, Ohio.
5x7, developing papers, of scenery, buildings of public interest; for anything. Post cards and 5x7 gaslight prints. Class 1.
- 3133—A. E. Davies, 2954 Linden Ave., Berkeley, Cal.
Desire to exchange prints and post cards for prints only; any subject. First-class work only sent and desired. Class 1.
- 3134—Otto C. Keil, 4458 Page Ave., St. Louis, Mo. Class 2.
- 3144—A. D. Miller, 937 East 12th St. North, Portland, Ore.
2¼x3¼ and 4x5, developing papers, of general views in Oregon, California and Western Nevada; for chiefly outdoor views. Careful work sent and requested. Class 1.
- 3167—George C. Gihllan, Lock Box 474, Cedar Rapids, Iowa.
5x7, developing paper, of local scenery and home portraits; for the same, nothing else, portraits preferred. Class 1.
- 3189—W. R. Davison, R. F. D. No. 3, Brighton, Iowa.
Post cards of street scenes, landscapes, river views, and farm scenes; for post cards of any interesting subject. Class 1.
- 3200—A. H. Parrish, Sodaville, Ore. Class 2.
- 3209—Frank Wallace, 501 N. Sheridan Ave., Ottumwa, Iowa.
3¼x5½, developing paper, of most anything; for anything. Post cards. Class 1.
- 3211—C. K. Conwell, Box 383, Altus, Okla.
Post cards and 5x7; for anything of interest. Class 1.
- 3227—Vern R. Huff, Chagrin Falls, Ohio.
3¼x5½, 5x7, developing paper, of landscapes, marines, animals, child studies, etc.; for nothing but first-class work, as I expect to send out same. Post cards preferred. Class 1.
- 3230—Lewis D. Capen, Box 24, Millbrook, Mich. Class 3.
- 3251—Vernon W. Hutchins, 39 Academy Square, Lacoma, N. H.
4x5, or smaller, developing papers, of general views, no portraits, prints or post cards, for general views, especially good snow scenes. Class 1.
- 3271—M. de Leon Imus, Lock Box 91, Chelan, Wash. Class 2.
- 3274—A. C. Revis, R. F. D. No. 1, Johnstown, Ohio. Class 2.
- 3275—Mrs. John Corvie, R. F. D. No. 3, Warsaw, N. Y.
4x5, various papers, of landscapes, marines, and animals; for the same. Desire post cards and developing paper prints. Class 1.
- 3394—George B. Lay, Lock Box 297, Kenmore, Ohio.
Has a new camera and can exchange larger sizes of prints.

CHANGES OF ADDRESS

- 383—John J. Prouty, 38 Seneca St., Baldwinville, N. Y.
(Was Philadelphia, Pa.)
- 1912X—R. E. Carter, 612 No. Waltz Ave., Slouss Falls, S. D.
(Was 614 No. Waltz Ave.)
- 2538—Edward H. Ruediger, R. F. D. No. 6, Box 9A, Webster Groves, Mo.
(Was St. Louis, Mo.)
- 2698—Lemuel Barber, Dysart, Iowa.
(Was Burlington, Wash.)
- 2823—Karl Zimpher, 714 First Ave. N. E., Independence, Iowa.
(Was Walker, Iowa.)
- 3118—E. W. Cochems, 982 East 42d St., Los Angeles, Cal.
(Was San Marcos, Cal.)
- 3350—Ira W. Guldner, 126 North Main St., Hutchinson, Kan.
(Was 21 West 8th St.)
- 3434—W. A. Flowers, Las Vegas, N. M.
(Was Elko, Nev.)
- 3482—A. P. Linn, 3627 Rockefeller Ave., Everett, Wash.
(Was Granger, Wash.)
- 3498—J. Hannam, 45 South 2d St., San Jose, Cal.
(Was Honolulu, T. H.)

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Department of Photography

The manifold applications of Photography to scientific, artistic and commercial purposes, has led Syracuse University to establish a Department of Photography, the university being enabled to do this through the generosity of an alumnus who does not desire to have his name mentioned. Much has been accomplished in this field, but the result of a combination of the scientific side of Photography with adequate instruction in art lines has not heretofore been considered. The instruction will be eminently practical and will at the same time give theoretical explanations of every process, while the classes in drawing will include composition, cast, portrait, sketch, painting of still life and anatomy. The aim of the department is to provide for students a thorough grounding in the optics and chemistry of photographic processes; a practical course dealing with every department of Photography; the art-training necessary for the utilization of Photography for expressing artistic feeling, and advanced or specialized courses to enable students to take positions as studio operators, photo-chemists and investigators.

Candidates for admission to the course in Photography are required to show by examination or by certificate that they have studied with satisfactory proficiency, the following subjects, viz: English Grammar, Geography, Arithmetic, American History, together with two years of high school work, which must include Elementary Chemistry, Physics, Elementary and Intermediate Algebra and Plane Geometry.

The course of study for the first year includes: General optics, photographic optics, the camera, exposure, sensitive materials, development, and printing. For the second year: Studio work, printing, color photography, photomicrography, stereoscopic photography, elementary emulsion making, late testing, and enlarging and reducing. Advanced courses will be arranged as required in wet collo-

dion; collodion emulsion; line and half-tone etching; photogravure; motion-picture photography.

The course in Photography will be opened with the Winter term, January sixth, 1913, and will be in charge of Mr. E. J. Wall, who is eminently fitted for this work. Mr. Wall is a Fellow of the Royal Photographic Society of England, a member of the American Chemical Society, a member of the Pharmaceutical Society of Great Britain, and foreign abstractor to the *British Journal of Photography*. He was also, for three years, instructor in three-color photography under the London County Council. Mr. Wall is the author of "The Dictionary of Photography," "Carbon Printing," "Photography," and "Natural Color Photography," and was for five years editor of *The Amateur Photographer and Photographic News*.

The tuition for the course in Photography is thirty dollars a term (one-third of the year). There is also an incidental fee of five dollars required each term, and a matriculation fee of five dollars, payable on entrance. For further information concerning this course, address George A. Parker, Dean of the College of Fine Arts, Syracuse, New York.

Mission Studio Sold

Claud H. Simson and Virginia L. Simson have purchased this well-known studio on Franklin Street, Santa Clara. Both are well-known people, who have strong artistic faculties, Mr. Simson having received his preliminary training with the firm of Johnstone, O'Shannessy & Company of Melbourne, world renowned for the charming finish of their work in monochrome and in color; later on with Matthews of Geelong, expert and gold medalist, then taking a six years' course of study in the South Australian State Art School designing, landscape painting, figure and portrait painting. His wife, Virginia L. Simson, is a woman of strong individuality, having great energy and many

accomplishments and in addition great feeling for art with a deep enthusiasm to aid her husband to produce high-grade work.—*Santa Clara Journal*.

Kodaker Lands the \$5000 Prize

The announcement of the photographic competition of Lord Northcliffe's newspaper, the *London Daily Mail*, created a sensation in the photographic world, not alone because the prizes offered were the largest ever known in a competition of this kind, but because the conditions were unique and the contest was open to the entire world.

The idea was to picture a vacation, or holiday, as our English cousins call it, and the awards were to be made to the contestant whose pictures showed the most fun derived from a particular vacation. There were no restrictions whatever as to the kinds of cameras, films, plates or papers to be used, but each contestant was required to give this information.

The first prize of one thousand pounds was awarded to a set of pictures made with a 3A Folding Pocket Kodak, by Douglas A. C. Brown of London. The second prize of one hundred pounds was divided between two European competitors, one of whom used a 3A Folding Pocket Kodak. The third prize of fifty pounds was divided between D. Van Deventer of Winona Lake, Indiana, who used a Century camera, and a competitor using a camera of European make. Pictures made with Eastman goods captured the first prize and participated in each of the other two prizes. Kodak is evidently strong on the other side of the water as well as here.

The judges of the contest were appointed by the *Daily Mail* and consisted of the Editor and the two well-known novelists, Mrs. C. N. Williamson and Max Pemberton. The three very large prizes, approximating fifty-six hundred dollars in our money, no doubt stimulated the vacation idea in England, as was the intention of the *Daily Mail* in originating the competition.

Dallmeyer's New Rapid Telephoto Lens

In most ordinary cases the telephoto lens, notwithstanding all its advantages when large images of rather distant objects are required, ceases to be available for rapid snap-shots when the weather is cloudy or the light dull, and a good illustration of the telephoto lens is afforded by a cricket or

football match, it being hopelessly impracticable for the photographer to station himself so as to be near to the various and shifting points of interest, hence the use of an ordinary lens results in figures being so small as to but very imperfectly record or delineate those characteristics of action which give special value to photographs of such subjects.

In such cases as those above mentioned the first impulse of the photographer is to make use of a telephoto lens so as to obtain large pictures with a short camera extension, and all may be well when the light is brilliant sunshine or diffused light almost equal to sunshine. It is when the light falls off that the worker feels the limitations of the usual telephoto lenses, as, for example, on dull days in the cricket or football field, or under dense cover in the wood or plantation. But now that Messrs. Dallmeyer have provided the photographic world with their new Adon, working at the portrait lens aperture of f-4.5, there is new scope for instantaneous telephotography on dull days and in places where the natural light is obscured.

The lens now before us is a new large Adon, having an effective focal strength of twelve inches, and working at f-4.5, or portrait lens intensity; the exact catalogue description being, No. 2 Series XI. This lens is intended primarily for a quarter-plate camera, whether ordinary or reflex, and not only will it give figures three times as large in linear dimension (or nine times in area) as a lens of four inches focal length, but, in addition, the Adon furnishes a more desirable perspective; a perspective which gives natural effect when the resulting photograph is at a convenient distance from the eye, that is to say, twelve inches.

It need scarcely be said that a rapid telephoto lens must necessarily tend to largeness, as the front window or entering pupil cannot possibly be less than the focal aperture; in this case twelve inches divided by 4.5, or two and sixty-six hundredths inches, and this is the diameter of the front positive combination, but by careful mounting the size of the external tube is kept down so as to be only a trifle over the diameter of the actual glass. The mount itself is of minimum weight; aluminum or an aluminum alloy being used. This large front lens,

NOTES AND COMMENT

if used by itself, possesses a light intensity bordering on f-2 the focal length (of the front lens alone) being about six inches. Although the front lens alone may do good service in relation to night photography, or in quite special cases, the finest definition must not be expected; but the purchaser of the new rapid Adon has a useful supplementary or additional power in this use of the front lens alone.

The back or negative combination, which is about an inch and a half in diameter, and is fixed at a distance of about four inches behind the large lens, spreads out the rays of light so as to give the effect of short focus with a minimum extension, and at the same time the intensity of the light is brought to f-4.5, or about the usual portrait lens standard, while the definition is sharpened to a normal standard.

We may refer to a probable use of the lens now under notice, moreover a use which may lead to a considerable extension of an interesting branch of photography. The user of a reflex camera will occasionally specialise on life-size, or nearly life-size photographs of the smaller living kinds, as butterflies, bees, dragon-flies, and the like, these being usually taken at the time of settling on a plant. By the use of the new rapid Adon the full intensity of a portrait lens should be realised, with the by no means small advantage of an increased distance from the elusive quarry. We have not made an actual trial of the lens in relation to this phase of work, as it might have been necessary to slightly alter the adjustment for spherical aberration to get the best result for work on a scale approximating to same size or equal magnitude; and this slight alteration might have involved uncementing and separation of the lenses, and possibly a regrinding of one of the surfaces; but opticians expect to have lenses returned in an unaltered or merchantable condition.

The proportion of amateur photographers who are also practical opticians is now so small as to be almost negligible, and but few purchasers would care to be troubled with any alterations or readjustments, but should circumstances warrant the step it would be quite easy for Messrs. Dallmeyer to send out the new rapid Adon with any necessary adjustment (based, maybe, on the method patented by the late J. H. Dallmeyer

in 1866), whereby the rapid Adon could be instantly set to the finest definition for full-size work, or restored to its normal adjustment for the finest definition when used in the ordinary way.

All classes of photographic workers may find occasional uses for the rapid Adon, and particulars as to price and the various focal lengths are contained in a pamphlet which can be had by addressing the American Agents, Burke & James, 240-246 East Ontario Street, Chicago, Illinois.

A Special Course

We have received a prospectus covering the special course for professional photographers at the Southern School of Photography, to begin March third, 1913. As outlined, the course is a very fine one and one that is certainly intended to be of the most practical and helpful character. These special courses have been highly appreciated by those taking advantage of them in the past and they are getting better each year. Do not fail to investigate this coming one by writing for a copy of the prospectus. Address: Southern School of Photography, McMinnville, Tennessee. An advertisement will be found on another page.

Gundlach Portrait Lenses

The Petzval type of portrait lens, originated away back in 1840, is still the most popular lens for studio work. While the form of this lens remains the same, it has been made under modified formulas by many opticians who have been more or less successful in making lenses of this kind. The good lenses are the result of a carefully calculated formula, the proper optical glass to carry it out, expert skill in grinding and polishing, accurate adjusting and mounting; in fact, everything is right. The poor lenses are made from an incorrect formula, the glass may not have the right properties, and poorly finished surfaces account for the rest, a lens which gives a poor result. Most cheap lenses have two common faults,—improper chromatic correction and poor surfaces.

The Gundlach-Manhattan portrait lenses, working at f-5, are much better than those made years ago, because they have the advantage of being able to obtain improved optical glass by using which they can bring the original Petzval lens to a higher degree of perfection. These lenses are offered at

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moderate prices which put them within the means of photographers of all classes, and yet these portrait lenses should not be classed with any cheap portrait lenses on the market. Write the Gundlach-Manhattan Optical Company, Rochester, New York, for particulars.

Color Photography

Among the announcements for the new year, is that of Will Rounds, setting forth the success that he has attained in reproducing, on Autochrome plates, natural colored views which are marvels of perfection. Photographers have used these plates with indifferent success, but by long continued experimenting Mr. Rounds has been successful in producing some very beautiful pictures of flowers and autumn foliage. He is planning for an exhibit of this work in the near future. In the meantime he will gladly show any one interested samples of this work, of which he has some handsome specimens for sale.—*Lowell Courier-Citizen*.

Blitzlicht-Autochrome Screens

The Berlin Aniline Works wish to announce that they now have in stock autochrome screens adjusted to the "Agfa" Blitzlicht Powder, as follows: No. 1, $1\frac{1}{4} \times 1\frac{1}{4}$, \$1.00; No. 2, $1\frac{1}{4} \times 1\frac{3}{4}$, \$1.50; No. 3, $2\frac{3}{8} \times 2\frac{3}{8}$, \$2.00; No. 4, $3\frac{1}{2} \times 3\frac{1}{2}$, \$3.00; No. 5, $4\frac{3}{4} \times 4\frac{1}{4}$, \$4.00; No. 6, 6×6 , and No. 7, 5×7 , \$5.00. These can be ordered through any dealer or direct from the Berlin Aniline Works, 213 Water Street, New York.

New Quarters Necessary

Owing to the continued increase in business the Northern Photo Supply Company, one of the largest photo supply houses in the United States, has found it necessary to move into new and larger quarters, and have secured a long lease in the Reid Corners, corner Ninth and Nicollet Avenue, Minneapolis. This is a new, modern building on the main thoroughfare, and they will move in on or about February first. They will be in a better position than ever to handle their rapid growing business, as the new place contains more than nine thousand square feet, which is more than twice the size of their present quarters.

Drying Prints Flat

There are many successful ways of drying prints so that they will lie flat, but they all require quite a bit of trouble and expense and more or less room, especially when

frames covered with muslin are used for this purpose. The simplest and most convenient method and the one which takes up the least amount of room is the Eastman Photo Blotter Book. This book is made up of twelve leaves of the best lintless blotter, giving twenty-four surfaces, $8\frac{1}{2} \times 11\frac{1}{2}$ inches, on which to dry the prints. The book is interleaved with sheets of waxed paper. Lay the wet prints face down on the blotter and run a roller over them to expel the surplus water. Then turn the print over so the face will come next to the waxed paper, and place under slight pressure to dry, when the prints will be perfectly flat. The Eastman Photo Blotter Book sells for twenty-five cents, and will be found worth many times its price in the convenience and satisfaction of easy print drying.

Home Portraiture Easy

With a few simple instructions, the making of home portraits is almost as easy as making snap shots out-of doors, and it is certainly more fascinating to many. The only equipment necessary is a kodak portrait attachment to fit the kodak or Brownie camera, and this may be had of your dealer for fifty cents. The necessary instructions will be found in the handsomely illustrated booklet, "At Home with the Kodak," which may be had from your dealer, or will be sent you on request by the Eastman Kodak Company, Rochester, New York. The information contained in this booklet will not only enable you to be successful in making home portraits with the aid of the kodak portrait attachment, but will help you in many other ways to become more proficient in making those most interesting of all pictures that tell the story of the home.

Notes from the Illinois College

Mr. and Mrs. Bissell have just returned from San Francisco, where they have been spending the past month at the home of their daughter.

A large number of students have enrolled for the January class, among them Roberto R-driguez of Matanzas, Cuba; Alfred Lomen of Cape Nome, Alaska, and E. Hong of Canton, China.

Carlos Horales, who finished the engraving course last year, has again written to the college to secure another engraver for his government, Venezuela.

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SAN FRANCISCO
CALIFORNIA

What Happened to Mary's Picture?

IT'S mortifying to be asked about the picture which never came out.

"Not enough light, because she insisted on being snapped just as she was, under the tree."

This excuse is avoided with a rapid lens and the film that "gets there"—the speedy, color sensitive

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Speed 120 Wy.—200 Wa.

The Twin Books, teaching the Ansco way—the only way in photography—yours for the asking.

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A PORTRAIT
By WIDLIAM WESTMAN

**CAMERA**



**CRAFT**



A PHOTOGRAPHIC MONTHLY**FAYETTE J. CLUTE, Editor and Proprietor****CALL BUILDING****SAN FRANCISCO****CALIFORNIA****VOL. XX****MARCH, 1913****No. 3**

The Most Satisfactory Camera**By C. E. Vetter**

With Illustrations by the Author

A satisfactory camera, to me, means one that is capable of work under unfavorable conditions of light, one that will stop rapid motion, and one that can be easily carried about and quickly brought into action. In addition to these requirements there are other reasons why I chose the 3A Graflex that I have found so satisfactory. I am partial to roll film, as it allows me to use the Kodak developing tank, a utility that obviates the necessity of a dark-room and gives me better results with less fuss. Having no dark-room at my disposal, plates and film packs do not appeal to me. The negatives from which were printed the pictures sent with this article were all developed with the tank, and they are clear, crisp, good printers. I do not like plate holders or adapters, even after eight years of experience with them, starting with a 4x5 box camera and working up to a 6½x8½ view camera. Of course, one should not forget, but human nature will assert itself, and I have found out that plates develop very slowly when one makes the exposure on the slide instead of on the emulsion behind it. Sometimes the slide gets caught, causing one to lose an exposure that is very much wanted; sometimes the holder does not fit snug and one has a nice black streak on his otherwise prize picture. These are some of the reasons why I prefer the camera using roll film; and let me say right here that I do not know what a fogged film is with my 3A Graflex. This feature alone has value measured in film saved.

The greatest advantage the Graflex has over some other cameras is its permitting of focusing through the lens, making it unnecessary to depend upon

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a finder, which, showing the subject much smaller than the image, often deceives one. The Graflex way enables one to see the image formed by the lens as it will be taken, and the picture one sees is right side up and the full size of the film. When focusing by scale, one cannot see the effect of stopping down the lens, but with the Graflex he can; and, no matter what change of position is made, pointing upward, tipping sideways, moving forward or back, the result is seen at once. That this feature has a value is at once apparent, as no one likes to have pictures, particularly those that cannot be duplicated, spoiled by a cutting off of some important part of the view or subject. If this fault is committed with the Graflex, it is due entirely to the "I-don't-care" disposition of the user. We all know the routine of operating a plate camera, but perhaps some of my readers are not familiar with that of the Graflex. It requires just three simple movements to bring this camera into operation from the position of being carried closed in the hand. The pressure of one button opens the front, one movement pulls the front out and the third opens the hood. The three movements do not take more than five seconds, and one is ready for anything from a cannon ball to a pussy willow.

Many amateurs think that the Graflex is good only for speed pictures; but, simply because it has a speed of one-thousandth of a second is no reason why it is not eminently suited for slow automatic exposures as well. This last I proved to my own entire satisfaction some two weeks ago, when, at 3 p. m. on a dark, cloudy afternoon, so obscure that no shadow was visible, I made an exposure on my home, a dark green bungalow, and secured a negative that was fully timed and rich in detail. The exposure was made with the lens stopped down to f-8, with the fourth tension and curtain set at open. Users of the Graflex know that this gives a slow drop of the curtain, an exposure that is as easy to use as the faster speeds, but of course one making it necessary to use the tripod. No other shutter has such a wide range of speed as has the focal plane, which, on the 3A Graflex, is from one-thousandth of a second down to very slow when used as above, while time exposures are as easy to work as with other machines. **What more could one wish for in the way of range of exposures?**

The original cost of the Graflex seems high to the average person, but if one will stop to think that with one he is certain of results, without waste of time or material, it will not take long to figure that the Graflex is the cheaper in the end. I have never regretted the extra money mine cost, and I have to work every day of the year at an occupation not affected by the moneyed class. The camera has helped me, not infrequently, to make exposures during my spare moments that brought good orders. I have carried it with me on all my tramps afield; and, although somewhat heavier than some other cameras, I never regretted the slight additional weight, because I always secured satisfactory pictures. The working parts of the Graflex are all conveniently placed, making its manipulation come quite natural after a few times; the exposure lever comes so natural to the thumb of the left hand that one could find it in the darkest night, were that desired. The pictures of children and that of the puppies, shown herewith, were taken in the shade of the houses, using a Tessar IC lens stopped to f-5.6, and a shutter speed of one-fiftieth of a second. One can realize

THE MOST SATISFACTORY CAMERA



THE LITTLE GIRL NEXT DOOR



MY NIECE AND HER DOLL

that speed is never more needed than when making exposures on children, especially those at this age, and this is where the Graflex is supreme. It is a pleasure to catch children at play when one knows that he will get good pictures for his trouble. The picture of the train was made at Keechelus, Washington, in the Cascade Mountains. I had only half a minute to prepare for it, but achieved the desired result with ease and dispatch.

Summed up, these are the points of value I find in the 3A Graflex: First, most desirable size, compactness, roll film with no slides or holders, and use of developing tank with no dark-room needed, saving time and fuss, yet giving good results. Second: Focusing by means of the image itself, full size and right side up, making guesswork unnecessary. Third: A focal plane shutter with speeds ranging from one-thousandth of a second down to time, which are all one needs for any possible conditions. Fourth: Ease and quickness in making ready for exposure and convenient location of the working parts. I really have some hesitation in saying how well pleased I am with this camera, fearing the reader may think I hold a brief for its makers, which I certainly do not. As to lenses, I have used only three different makes, each of a different speed, and can only advise that my preference is for the Bausch & Lomb Tessar IC, working at f-4.5. On my 3A Graflex I use the No. 15½, which is listed as covering



A PLEASING POSE



THE FAST FREIGHT
105

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a 5x7 plate, because I do not like a too short focal length. I have tried to explain just why I like this particular camera and trust my so doing may help some other worker to decide as to what will fill his own particular requirements in the camera line.

It might be advisable, before closing, to give a few notes concerning the pictures herewith. One of them shows a little girl with a dog. Our next-door neighbor had asked us, wife and me, if we would take a picture of their little girl at any time that there was a chance of getting a good one, one showing her in some childlike pose. One afternoon, as we were out in our back yard having a good play, I thought there might be a chance to get the girl with the dog. Both being quite lively subjects, I judged that some jockeying would be necessary, so I brought out my Graflex and tried to get both the child and the dog to look in the same direction at the same time. I found it necessary to watch them very closely, as only one can with an instrument of the Graflex type, keeping them in focus ready for immediate action when the proper moment came. It will be noticed that the speed, one-fiftieth of a second, gave me good detail, although the subjects were in the shade of the house. The f 5.6 stop was used. The little girl with the doll is my niece, and of course all of us wanted a good picture of her in one of her "cute" poses, especially one that would please her grandparents. This last is not the easiest thing to accomplish; they do not like pictures showing a child stiffly seated like a block of wood, with the expression entirely lacking interest. We certainly had some fun getting this lively young lady to settle down for even an instant. She was so interested in my camera that she would persist in coming toward it; and, when she did happen to be at the proper distance, her back was almost invariably turned to the camera. Finally we got a doll; and with my Graflex it was not long before her picture was recorded on the film. The pose was maintained but a second, so the reader can see that the camera must have been about right for the job. The speed was one-fiftieth of a second with stop f-5.6, subject again in the shade.

The picture of the child with the cat did not require more than three minutes to secure, even that delay being caused by the cat's objecting to notoriety, although he finally consented to pose in his own lazy way, if not to my taste. The expression of the child being just what we desired, I pressed the lever, knowing the picture was there, as I was watching the image, full size, for the right expression while keeping them in focus all the time. The ability to do this I find of the greatest value in taking pictures of this kind. Stop, exposure and conditions were the same as with the others. As to the next, have you ever watched puppies at play without wishing you had a picture of them that would be somewhat natural? I wanted a picture of these particular pups and I was determined to stay with them until I succeeded in getting one. I tried that stunt with cameras other than the Graflex and never obtained results. With my new camera in my hand I had a feeling of confidence that I would secure something at least worth developing. These pups were indeed active, very active, and I was lucky enough to get two of them looking the same way at the same time. As a rule they were either in a furry heap or scattered all over the lawn. Some milk in a dish finally gave me a good chance and I made half

THE MOST SATISFACTORY CAMERA



"A PICTURE OF THOSE PARTICULAR PUPS"

a dozen good exposures, all as good as the one shown. Lens was stopped to f-6.8, one-fiftieth second exposure, also made in shade of the house. The train is a freight passing through Keechelus, Washington, about twenty-five miles an hour. I had to step lively for this, as I was some distance from the platform where I knew I must be to get the side with the curve. I opened my Graflex as I ran and got in position just as the train seemed to be right on me. One little turn of the focusing pinion brought the lens in focus and I stopped the engine in its tracks with an exposure of about one two hundred and fiftieth of a second, getting all the detail needed. One could have caught this train with almost any camera by being ready for it, but could hardly have done so while making a quick jump for the station platform with the train nearly on top of him. Ten to one, using another camera, he would only have secured a picture that was out of focus and blurred.

Decorative Art

It is characteristic of decorative art that it depends almost as much upon the critical as upon the creative faculty of the artist. More than any other art it depends upon taste; and by that test it stands or falls. It is taste that determines—what is it that it does not determine in decoration? It settles in the first place whether there should be decoration at all, how much of it, of what kind, where it shall be introduced, and how executed. It prescribes what is wanted, what is admissible, and what is becoming. Not one of these questions can be solved without reference to it. Every work of applied art is a problem, and the most important factor in its solution is taste.—LEWIS FOREMAN DAY.

Night Scenes by Photography

By Charles M. Smyth



With Illustrations by the Author



WAITING FOR THE CAR

PHOTOGRAPHS taken at night, that is, those taken out of doors without the aid of a flashlight, are not uncommon, but they are usually merely the portrayal of brilliantly lighted streets or buildings, characterized by the conspicuous absence of life or moving objects. Even if the photograph be of a busy street, the scene appears entirely vacated, the picture being reminding of a cold and desolate night and strongly suggesting the hour of midnight. The myriads of lights may be shown in all their artistic arrangement, but no one is there to see them.

The predominance of such pictures results from a prevailing idea among photographers that exposures made at night must be of considerable

duration if one is to record upon the plate anything more than the lights themselves. As a rule, few animated objects remain stationary for a longer period than a few moments, and if an exposure of any length be attempted upon a subject including such objects, there is certain to be some evidence of movement in front of the camera, quite frequently enough to ruin the picture. This is particularly true of light-colored objects. The movement of a dark object will not be recorded upon the plate unless it should remain stationary for a moment, then move to another spot before the exposure is finished. Night pictures that are good, except for their lack of human life, have been and are being taken with exposures of from five to twenty minutes; but it is possible to take pictures that are far better, on account of the human interest, with exposures of a less number of seconds.

NIGHT SCENES BY PHOTOGRAPHY



AN EVENING PAPER—A scant second exposure.



THE POPCORN STAND—Two seconds exposure.

In the rapid development of our larger cities and in the increased use of electrical illumination, the lighting of the streets and stores at night has shown wonderful improvement. Denver, Colorado, is known as "The City of Lights," and she is never more picturesque than at night when the shroud of darkness has settled upon her. Traffic moves about her brilliantly lighted thoroughfares beneath great arc lights and myriads of incandescents. It is quite a fad with photographers in Denver—this getting out on the streets at night with their cameras; but long exposures, one, two, five or even up to ten minutes, are usually given, and the streets appear vacant in their pictures, except for an occasional waiting taxicab or bicycle standing by the curb.

In an attempt to remedy this defect and to remove the objection, I have been cutting down my exposures; and, in doing so, have been agreeably surprised to find how short an exposure I can make and still get good results. There are numerous locations sufficiently illuminated to enable me to take what can truthfully be termed "snap shots," and snap shots that will show the life and traffic of the street. It is true, I used an extremely rapid plate, but I employ one of the best and most rapid lenses on the market, a Goerz Dagor.

It has long been my ardent desire to photograph, with some degree of suc-



THE SHOW HOUSE—Between two and three seconds exposure.



THE WAITING AUTO—Two seconds exposure.



Made with a Rapid Rectilinear lens. The two spots at sides near bottom are "ghosts" of string are lights above and diagonally opposite, though outside the picture.



Made with an ordinary Symmetrical lens. Lack of sharpness is the fault of the lens, as incorrect focusing would have left some part at least sharp and some other part much more lacking.

cess, the scenes along the brightly illuminated city streets at night, when the people are out for their recreation. The gaily dressed merry-makers and theater-goers, passing to and fro beneath the brilliant lights, the grotesque and dancing shadows, transforming the busy streets into a veritable fairyland, these are fascinating in the extreme to a camera enthusiast like myself, one who delights in reproducing those scenes which impress him most strongly.

In my attempts to record these, to me, most interesting scenes, I have experimented a great deal and find it not a difficult matter to get "snap shots," if supplied with the proper equipment. There are four requisites necessary: A focusing camera with ground glass, a rapid plate, a shutter which is automatic on the bulb exposure, and, most important of all, the right kind of a lens. Only after extended experiments can I attribute my success mostly to the nature of the lens I use. I have tried many makes of lenses, some low priced and some very expensive; but I finally settled upon a Goerz Dagor, Series III, finding I could get the best results with it. The pictures with this article were all made with this lens except as noted otherwise. A rectilinear lens will not do at all when arc or other extremely bright lights happen to be within a certain radius of the center of the field. With a rectilinear lens such lights throw spherical halation marks or "ghosts" upon the plate at a point exactly opposite and at a distance from the center about equal to the lights that cause them. Some types of symmetrical lenses throw these halation marks far enough from the center to take them completely off the plate, but I have yet to find one such lens that will, at the same time, give definition sharp enough to show proper detail.

NIGHT SCENES BY PHOTOGRAPHY



WITH PAVEMENTS WET



THE PLAY HOUSES

By alluding to "snap shots," I do not mean actual instantaneous exposures, for such are still rather out of the question. However, with a little patience and by careful manipulation, one can make bulb exposures of from one to four seconds and get results that are suggestive of instantaneous exposures, through their freedom from "moved" effects. There are moments when but few of those on the street are in motion; not when the crowds are at their height, but shortly after the evening meal and before the theaters have opened their doors. At such times people are inclined to stand leisurely about, looking and waiting; and then, by watching, one can often catch a view at the opportune or critical moment. At the moment when a street car or taxicab stops for a passenger there will be from one to several seconds during which no apparent movement will be made by any one within range of the camera. If the operator is all ready, with camera focused, shutter set at bulb exposure, and hand on the release, he can open the shutter, hold it open until he sees some movement before him, and then instantly close it.

It does not take a great deal of practice to become proficient in catching these opportunities. They occur often and at many different points. It is essential to find a very bright locality where the lights are concentrated and where people are apt to congregate. One can, by searching about, find near it a secluded spot, such as behind a taxicab or a private auto left waiting by the curb; or in the entrance of a store with its doors closed for the night; in fact, any location where one can stand safely without fear of having his tripod jostled by those who pass, is a good place. After the proper viewpoint has been found, adjust the camera, focus it carefully to cover, with the sharpest possible definition, just the view wanted, and then wait. Here is where patience

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is a valuable asset. If, just when one thinks the opportune moment has arrived and he opens the shutter, there immediately occurs some decided movement which will spoil the plate, he should not become discouraged, but insert a new plate and try it again. One success is worth a dozen failures. It will be found that from one to three seconds is often long enough to give the plate sufficient exposure, while yet short enough to show no movement on the plate.

Pictures taken at night can be made, through careful selection of viewpoint, as good in composition and artistic quality as any taken in daylight. Frequently, at street corners where there is only one arc light, manipulation will enable one to place this light well to one side and entirely out of range of the camera; or sometimes the light can be obscured by an object such as a pole or a limb of a tree brought between it and the lens. This eliminates all danger of halation and allows one to compose quite pleasing pictures with the long shadows and weird masses so characteristic of night scenes. The outside of a door or window, with the light streaming from a well lighted room beyond, will frequently be found a good subject. Here the same rule applies as under daylight conditions; as the light is less, the exposure must necessarily be longer.

The development of night exposures, while not difficult, must be carried on a trifle differently from that of ordinary daylight exposures. I get the best results by using an extremely strong developer in connection with a mild restrainer. So working, the image flashes up very quickly, and development is completed in from six to ten seconds, for the plates with bright arc lights upon them, and never extends over a minute with the plates which have only a few lights in the view. Do not rinse, but drop at once into strong hypo. In that way only the surface of the emulsion is developed. Most of the extreme halation seen in night pictures is due to forced development. The brighter lights within the field of the lens strike the glass, are reflected back onto the under side of the emulsion, and forced development simply brings out this halation next to the glass. I suppose, by careful use of an intensifier on the



AN UP-TOWN STREET SCENE—Made with ordinary symmetrical lens. Long exposure. No near strong lights to give trouble.



WHERE THE CAR STOPS—Made with ordinary symmetrical lens, giving all exposure allowable before car started.

NIGHT SCENES BY PHOTOGRAPHY



THE NIGHT PROWLER—Seven minutes exposure, orthochromatic plate, only the light from window.



THE CORNER MAIL BOX—Seven minutes exposure, orthochromatic plate, only one arc light.

thin portions and a reducer where the heaviest halation occurs, one could touch up a negative and greatly improve it; but as I have not yet tried it, I cannot speak with authority.

A wet night, while not the most pleasant one in which to go out with a camera, is particularly suited for this class of subjects. Each wet object, as well as the wet pavements, reflect the light, breaking it up and diffusing it by



WASHING OFF THE PAVEMENT

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sending it into the camera from more numerous points. As a rule, it is best to have some light from behind or from one side, but the most light should come from directly in front of the lens, the objects to be photographed lying between the camera and the lights.

All in all, I am quite sure that any camera enthusiast who will take the trouble to once try night photography will find it the most fascinating of photographic work, and if he persist, he will surely get results that he will feel to be his most interesting pictures.

One nation dates the birth of its art a thousand years ago; another is looking for it still to come. Only so much is certain that in the first stirrings of an impulse to art, under all zones and at all times, a remarkable harmony may be observed. It is the original universal language of mankind, the traces of which meet us in the islands of the Southern Ocean as on the shores of the Mississippi, among the old Celts and Scandinavians as among the heroes of Homer and in the interior of Asia; only in these primeval times this language does not pass beyond its first stammering utterance. Man is still too much fettered by surrounding Nature; he ventures still too little beyond her immediate conditions for him to be able to rise to the portrayal of images of individual freedom. Hence these primitive works seem rather the results of the workings of a general law of Nature than the conscious creative efforts of individual man. The farther man advances, in the course of time, on the path of progress, the clearer stand out the differences of individual minds and the richer is the abundance and variety of individual character.—CLARENCE COOK.



ROAD TO THE LAKE

By R. E. WEEKS

Photographic Art Principles

By A. T. DeRome



With Illustrations by the Author

EDITORIAL NOTE:—*Mr. DeRome, although still a young man, comes to our pages with more than the usual qualifications possessed by those who presume to instruct. Not only is he blessed with unbounded enthusiasm, but, having had to work his own way from the bottom up, his tireless passion for work and investigation along any lines that might promise a clearer understanding of the underlying principles of art has resulted in a fund of knowledge that should give his words weight. His intimate knowledge of the precepts governing the use of the graphic arts as a vehicle of thought, his ability to convey these precepts to the minds of others through the medium of the spoken word, will, we believe, enable many amateurs to see more clearly through what now seems to them to be a fog of mysticism enshrouding the making of artistic pictures by photography.*



THE AUTHOR AT WORK

matter of the mind, the imagination; an appeal to these qualities as they exist in mankind as a whole, or individually in proportion to his varied degree of mental development.

The work of an artist who is endowed with imagination and who expresses himself impressionistically, will appeal but little to a man whose mind is material and mechanical. The latter will find more to admire in a picture that

Man differs from the lower animals in that he has a conscious mind—is endowed with greater reasoning powers. Men differ from each other in the amount of imagination they possess, in the degree of cultivation their minds have received and in the extent to which their emotions influence them. It is on these facts that the old truism, "Many men of many minds," is based. It is this variety in the mentality of our fellow beings that renders it impossible to appeal in like degree to all or to expect the appeal of different individuals to take the same form. It is this situation that renders it impossible for one to lay down definite dogmas concerning art, dogmas that could be universally accepted. In dealing with art—the graphic expression of our ideas, one is not dealing with an exact science like chemistry or physics. Art is a

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is characterized by its truthfulness to detail, even though it be lacking entirely in that which would appeal to the man endowed with a greater measure of imagination and feeling. On the other hand, a picture built around some great problem of humanity, one common to all, and with its technique or manner of expression, along with its several other elements, in harmony with the thought: such a picture will be understood and appreciated by the mind, whatever its amount of training or development may be. A picture is nothing more or less than a means employed by one mind to convey a certain thought or feeling to a number of other minds, just as the spoken word, the printed page, or the musical composition are means that may be employed to express ideas. And, as with these last forms, the more strongly the result can be made to appeal to the imagination, to stir the nobler emotions and tell a wondrous story, the higher art it becomes.

As has been pointed out, art is not a matter of grains and scruples or of gravitation and atmospheric pressure, and is, therefore, not reducible to hard and fast rules. Such instruction as can be given is more a matter of interpreting certain fundamental principles adopted by the masters and formulating from them more or less pliable rules, much as the same interpretation has been employed in constructing those rules governing the written or spoken words, called grammar. And furthermore, just as these same rules of grammar, rules founded on accepted usage, are also found to be based on good reason, so will the few accepted principles of art be found based on that which is understood as sound logic, even though the connection is often not easily recognized until pointed out. For example, if I tell you that some artists, in order to give a feeling of motion, make a point of allowing more open space in front of a moving object than behind it, and that we have consequently formulated a rule



A MURKY MORNING ON THE ALAMEDA SHORE

PHOTOGRAPHIC ART PRINCIPLES



SHEEP -MT. TAMALPAIS

to that effect, you would be inclined to think such a rule only an arbitrary one based on the practice of certain individuals. But, while it may have been that a careful analysis of famous paintings is responsible for the laying down of this rule, it is eminently sound for this reason: A person, looking through an opening to observe a moving object will unconsciously, through obeying the laws of nature governing his sight, maintain a position of the eyes that will keep more of the scenery in front of the moving figure than behind it. The reader will very readily see that this mechanical method of suggesting motion is based on a natural phenomena, which in turn causes a mental reaction, starting a train of thought known as an appeal to the imagination.

Pictures that are real thought products appeal to our imagination, to our emotions, arousing treasured memories. They cause our imagination to unlock the storehouse of memory, the repository of that wealth of other pictures that exist only in our minds. They express thoughts that, being in harmony with our own most cherished ones, appeal to our souls in a language of their own.

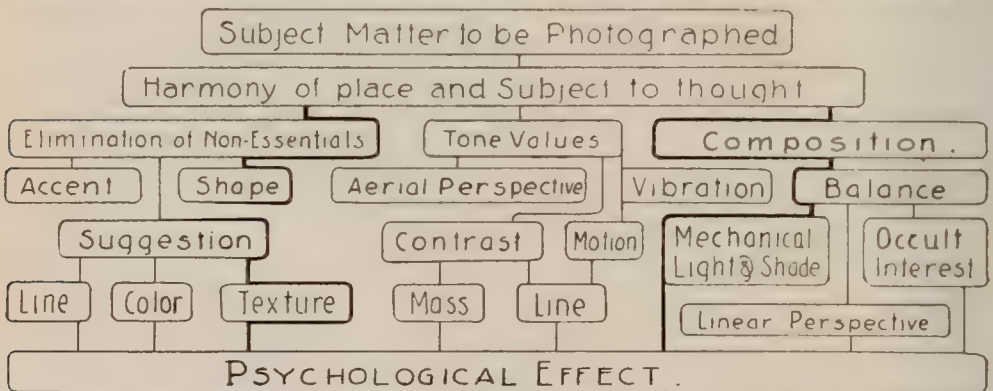
Make a critical tour of your print collection, perhaps the work of several years, and you will find that there are but two or three of the prints that really speak to you, really force your imagination to call up these memory pictures that no words could describe. And, if you will look closely at these few examples that are satisfying, these few that appeal to your innermost self, you will no doubt find that they are characterized by a simplicity of drawing, a harmony of line and mass, that, combined, expresses with a surprising fluency a single thought. This thought may be one of storm and anger, perhaps one of quiet

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peacefulness; but, catching the most minute thread of memory, it leads the imagination away to the realm of reminiscence, to the real pictures we enjoy. Look closer and it will be found that these lovable pictures are all portrayals of scenes near home or scenes closely associated with our daily life. In order to produce pictures, it is not necessary to work in locations fortunate in their scenic grandeur. There are greater things awaiting discovery within arm's reach. These subjects have never been found, and whether or not they ever will be rests mainly with you. A writer may draw a wonderful word picture of some awe-inspiring scene, but such writing does not achieve the influence, does not make the appeal to our emotions, does not possess the power to stir the soul as does the putting into words of a simple, homely bit of human interest.

Although we may not realize it, every painted picture, every dream picture, originates with a thought. The thought, one of myriads, conjoined with a state of feeling, produces an idea. Ideas seek expression and their doing so gives rise to the desire, always present in the human mind, to materialize these ideas. In photography this is accomplished by selecting from the material at hand that which will portray or express most strongly the idea conveyed to the photographer by that, in the case of a landscape, particular mood of nature. This understood, the real beginning, as far as our efforts to assist the photographer are concerned, must begin with the object or objects selected, the picture material. To start back of that point would be to assume control over the thoughts, the emotions, and the impulses of the reader. A mood of nature, one whose story is to be translated or brought within the understanding of the persons who may view the finished print, creating within them a definite emotion, must first appeal to the photographer.

Having now gotten on common ground with our readers through this introduction, I will proceed to take up and discuss the various factors that enter into the production of a picture. The diagram herewith, beginning with the subject matter to be photographed, and culminating in "effect," will help as pointing out



the relationship of the several factors to each other and to the whole, as well as the course which I shall follow in taking them up. The factors indicated by this diagram exist in varying degrees of strength in every picture. Hence the diagram is a more or less arbitrary one, although the relation of the factors to each other, as indicated, will be found correct enough for all practical purpose. The



IN THE ESTUARY

diagram will serve as a guide to the reader, assisting him in applying these art principles to his own problem. These principles will be brought out, each point consecutively as diagramed, in the following articles. The reader will get the greatest possible good from these articles by reading them, not as so many words or as an interesting narrative, but by having at hand a few of his own prints to which he can apply the various principles as they are laid down. Unless we thus work hand in hand, not only will my own time be wasted, but you, the reader, will be disappointed, will complain that there seems to be no one capable of writing so that he can be understood. I sincerely hope that such of my readers as are interested will not hesitate to write me, care CAMERA CRAFT, and ask for further information at any time that a principle set forth is not perfectly clear to them. Better still, send me an unmounted print and ask wherein the particular principle explained applies, as in all probability I can, with a stroke of the pen on the face of your own print, make the point clear.

Creative Power

It is significant that the men of creative genius are, as a rule, men of the greatest productive power. One marvels at the magnitude of the work of such men as Michael Angelo and Rembrandt, as Beethoven and Wagner, as Shakespeare, Balzac, Thackeray, Carlyle and Browning; not discerning that, as these master workers gave form and substance to their visions and insight, the power to see and understand deepened and expanded apace with their achievements.—
HAMILTON WRIGHT MABIE.

A Simple, Effective Shutter

By C. R. Lowe



With an Illustration by the Author

When a progressive amateur, one who began with a camera innocent of a bulb release, comes, in his own development, to make time exposures, he soon finds that the time lever with which his camera is fitted is quite unsatisfactory. Unless he has a very solid rest for the instrument, such as a tripod can hardly afford, it is difficult to "press the button" twice without moving the camera. It is not always another camera that is wanted, as much as it is the ability to use the one at hand to the best advantage; and, as is very often the case, these simple little cameras are capable of more than is asked of them. The enthusiast will be interested in seeking out the possibilities of the instrument he has. Limitations will crowd themselves upon him, he does not need to hunt them; but to get all there is out of the lens, a different shutter will be found necessary. To most workers the difference between one seventeen-hundredths and one one-hundredth of a second is mainly a difference of figures, and the lens on the ordinary box camera is not fast enough for an extremely high-speed shutter.

Here is an "in front of the lens" shutter that can be made in a few minutes, that can easily give a speed of one five-hundredths of a second, and one that

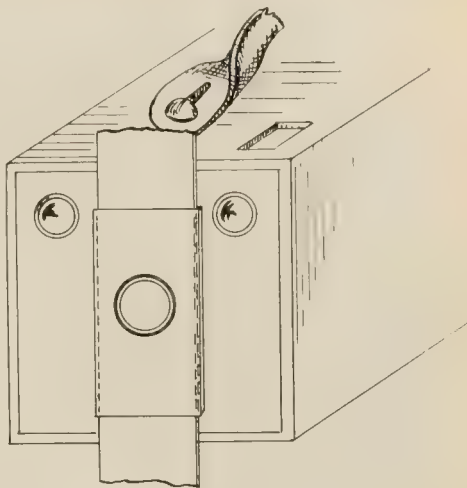


WON'T YOU PLAY WITH ME, PAPA?

A SIMPLE, EFFECTIVE SHUTTER

will cost nothing. Its disadvantage is that the speed cannot be indicated on a dial. It will be found neither to be in the way nor look badly on the camera.

Cut two strips off an old post card, an inch and an eighth wide, or narrower if necessary to avoid covering the finding lenses. Next cut a strip of the common black wrapping paper three inches wide, and wrap this strip around the strips of post card, pasting well as you wrap so as to make a hard body of the wrapping. When dry, cut a round hole in the middle, just a little larger than the hole in the camera box in front of the lens, and trim the ends square. Glue this guide on the front of your camera so that the hole in the guide encircles the hole in the board



evenly, and then withdraw the post card strips. Cut a strip of the black paper, six or eight inches long and a trifle narrower than the guide, so it will slip easily, and make a hole in the middle of it the size of the hole in the guide. Slip this into the guide and the shutter is done, a shutter that will work easily and will not move the camera even on the frailest support.

The exposure is made by opening the camera's own shutter and then drawing the slide upward so that the hole it carries is made to pass that in the guide, and of course the lens at the same time. If the opening is half an inch in diameter, a very ordinary "twist of the wrist" in moving the slide will give an exposure of one one hundred and twentieth to one one hundred and fiftieth of a second. By cutting other strips, making one-eighth inch slits in them, fixing one with the opening directly in front of the lens and then drawing the other opening past it at the same speed, an exposure of one four hundred and eightieth of a second will be given, computing the speed on a movement of five feet a second. The slits should be cut oblong and horizontal to get the maximum illumination. The speed can be made greater and there will be found room enough in the guide to accommodate two slides easily. The time is regulated wholly by the speed of the slip's motion. One can make the passing very slow by a continuous, steady motion, or can give any desired "bulb" exposure by stopping at the full opening and then closing, without fear of moving the camera. The slips can be carried in a notebook or allowed to remain in the guide. I have used such a shutter on my A1, bulbless kodak for over a year, and it has never failed me or annoyed me by its presence.

A man or woman in public or in private life, who ever works only for the sake of the reward that comes for the work, will in the long run do poor work always. I do not care where the work is, the man or woman who does work worth doing is the man or woman who lives, breathes, and sleeps that work; with whom it is ever present in his or her soul; whose ambition is to do it well and feel rewarded by the thought of having done it well.—JOHN RUSKIN.

Woodland Photography

By Charles F. Rice



With Illustrations by the Author



RETROSPECT. Instantaneous Iso Double Coated plate. Isochrom filter, stop f-22, exposure four seconds (as indicated by meter), developed with eko-hydro.

What place could be more inviting on a hot summer day than the cool, shady recesses of the woods: the winding path, the moss-grown rocks, fern-carpeted dell with nearby brook, and even the very heart of the forest where only an occasional gleam of sunshine shimmers through the leaves. From early spring, when the skunk cabbage appears and the twigs are tipped with their first tender buds, till glorious autumn with its red and brown and golden foliage, each day the woodland holds countless attractions. And in winter, too, when all is covered with mantle of snow and branches bend under burden of fluffy white, the trees cast purple shadows across the drifts and beckon anew to the camera man.

Each view affords fresh problems for the photographer. It is a question not only of form and line, of light and

shade, but the rendering of color also has to be considered. Altogether it is not an easy matter to catch the elusive charms of the wood.

First of all, we may regard it as an axiom that woodland photography requires non-halation plates. Patches of bright sky seen through the branches, or the gleam of brilliant sunshine piercing dense shade, form contrasts that are too much for the ordinary single-coated plate. A double-coated orthochromatic plate is the ideal ammunition to load into the holder—double-coated to prevent halation and orthochromatic because we shall sometimes want to use

WOODLAND PHOTOGRAPHY



TWILIGHT—Instantaneous Iso Double Coated plate, no ray filter, stop f-8, exposure one-half second (meter indicating one-fourth second), developed with rodinal.



FERN-CARPETED DELL—Instantaneous Iso Double Coated plate, no ray filter, stop f-16, exposure one second (meter indicating one-half second), developed with edinol-hydro.

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the ray filter. Roll film and film pack have excellent non-halation properties and are also color sensitive to some extent. Films are therefore suitable material for work in the woods.

Masses of light and shade make the picture and are the things to be first considered. The foreground is also a matter of first importance. It may be diversified by a rock or bunch of ferns or anything which gives balance and lends itself to the general scheme of the picture. Perhaps the best of all is a winding path or road, which serves not only to break what might otherwise be a monotonous foreground, but whose lines also lead the eye on to some point of principal interest.

Remember that you are attempting to represent in black and white a scene that is full of color. Be sure then that the form and light and shade of objects included will make a pleasing picture, irrespective of color. Then if a suggestion of color really can be retained, so much the better.

Certain it is that an unscreened plate, even though it be orthochromatic, will render the greens too dark. When green is predominant, however, as it is in the majority of summer woodland views, this does not so much matter. In fact, numerous experiments have convinced me that an amply exposed ortho plate without any filter will usually give a more truthful rendering than with the filter; that is, on this class of subject. The ortho plate, inclined by nature to a steep gradation, gives still harsher contrasts with the filter unless a very ample exposure be given. Add to this that the subject itself is contrasty and you find yourself 'twixt two evils if you insist on using the ray filter. Sufficient exposure to give full shadow detail will result in flattening the highlights and the representing of green as almost white. On the other hand, if the exposure be curtailed, the result is almost bound to be the traditional "soot and white-wash."

The delicate yellows and greens of early spring, and no less the gorgeous hues of autumnal foliage, cannot be depicted with even an approximation of truth without the ray filter. Winter scenes, when the sun is shining, also require the screen or filter to bring out the blue sky and "purple" shadows in contrast to the pure white or yellowish white of the sunlit snow. "Purple shadows" is not a mere poetic phrase, either. Snow shadows have a decided blue or purple cast; if it were so, the filter would not make them so much darker. Without sunshine, snow pictures require no filter. Its use, then, will make no appreciable difference.

In regard to the choice of a ray filter, a very pale yellow tint in the filter, necessitating an increase in exposure of three to five times, will be sufficient to make a marked improvement in the rendering of greens and light yellows. The deeper the yellow encountered in the subject, the deeper the color of the filter must be for a truthful rendering. An orange-yellow screen, requiring an exposure increase of fifteen to twenty times, is most suitable for the ruddy hues of autumn. Such a screen is not suitable for film, and should be used only with highly color-sensitive plates. For the truthful rendering of orange-yellow verging on the red, a deep-colored filter and red-sensitive plate are the necessary combination.

WOODLAND PHOTOGRAPHY



HEART OF THE WOODS—Standard Orthonon plate, no ray filter, stop f-6.8, exposure one second (meter indicating one-eighth second), developed with pyro-metol.

The photographer's judgment is severely taxed in estimating the proper exposure for woodland views. Especially is this true when working in heavy shade, with the sun shining through in spots. Under these circumstances one is almost bound to err on the side of under-exposure until taught by hard experience, for the light filtering through the green leaves does not affect the



IN BROWN OCTOBER—Instantaneous Iso Double Coated plate, Isochrom ray filter, stop f-11, exposure three seconds (as indicated by meter), developed with pyro-metol. The leaves on trees at the right were a bright yellow and would have photographed quite dark without the screen.



SPRING'S TENDER GREEN—L. Ortho Non-Halation plate, Isochrom filter, stop f-6.8, exposure ten seconds (meter indicating two seconds), developed with metol-ortol.



SHADY LANE—Kodoid plate, no ray filter, stop f-16, exposure one second (meter indicating one-half second), developed with edinol-hydro.

plate in proportion to its visual strength. The exposure meter is a fairly safe guide to the actinic intensity of the light, but even the meter's dictum must not be accepted blindly. I have usually found it safe, when working under the trees, to give four or five times the exposure indicated by the meter. There is an exactly correct exposure for every subject, of course, but it is not always easy to determine. Too much exposure is better than too little.

The sun's shining through the branches in spots is a matter of serious consideration. This effect of such lighting must not be allowed to make the picture "spotty." If the general scheme of composition seems good, but the sun does not shine in quite the right direction, perhaps a different time of day will be better for that particular view. A few minutes may make all the difference in the world. Some views are better when the sun is obscured.

Developing should be done with a developer with which the worker is thoroughly familiar. By using one that he knows takes just so long to produce the image on a correctly exposed plate, he is at once able to detect variations from right timing by the behavior of the plate in the early stages. And in using this advantage, one must not lose sight of the effect necessary to portray the feeling of the scene. Some subjects demand some strong highlights, while others do not. It is plain that treating the former as under-exposures and the latter as over-exposures would defeat the ends in view, despite the fact that they might suggest such treatment by the manner in which the image first appeared.

Patience and vigilance are necessary in this as in everything else and likewise here receive their due reward in superior results. If I have succeeded in giving some brother amateur a useful hint on the subject of "Woodland Photography," the purpose of this rambling discourse will have been fulfilled.

STEREOSCOPIC DEPARTMENT

Art versus Stereoscopy

By W. C. Marley



With Two Illustrations by the Author

A controversy at present rages in England over "Art vs. Stereoscopy." The pictorialists affirm that art is impossible in a stereogram. The stereo enthusiasts deny this with great heat, but are clearly in the wrong. Some will say that all depends on the definition of art. But art has no definition. Art is absence of definition; all the magazine examples teach us this. On this vital point the pictorialists triumph, for a stereogram must not lack definition.

True art in photography requires rough surfaces; the ideal medium would



LOG CABIN—STAWANGUNK MOUNTAINS

By W. C. MARLEY



THE DISTRICT SCHOOL.

By W. C. MARLEY

be Turkish toweling,—they will soon succeed in sensitizing it. Here, again, the stereogram falls short of the requirements, for it demands a smooth surface.

A "picture" must not resemble nature; if it does, it is a "record," it is not art. Yet a stereogram is often "so true to nature!"

One sees plainly that stereoscopy cannot be artistic. Perhaps that is why some of us like it!

A Miracle of Genius

Yes, he is a miracle of genius, because he is a miracle of labor; because, instead of trusting to the resources of his own single mind, he has ransacked a thousand minds; because he makes use of the accumulated wisdom of ages, and takes as his point of departure the very last line and boundary to which science has advanced; because it has ever been the object of his life to assist every intellectual gift of Nature, however munificent and however splendid, with every resource that art could suggest and every attention that diligence could bestow.—SIDNEY SMITH.



PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

SHORT STOP: To prevent stains when developing, pass prints into a bath made by dissolving two ounces of acetic acid in sixteen ounces of water. This short stop neutralizes the developer and stops its action at once, thus preventing those horrid yellow stains so often found on the work of the amateurs.—Geo. B. Ley, Ohio. (I. P. A. 3394.)

LABELING BOTTLES: But a strip of black passe-partout binding tape long enough to reach around the bottle and lap a little, and with white ink or paint letter it with the name of the contents. This label is neat, will stay where you put it, and the white lettering can be read in semi-darkness. Pour hot paraffine over it and it will be waterproof. This same binding is handy for temporarily mending a leaky bellows and for fastening masks to negatives when printing borders. A roll of it should always be kept on hand.—L. B. H., Michigan.

FIREPROOFING FABRIC: My flash bags are made fireproof by well soaking them in a solution made up as below, then wringing out and hanging up to dry. The solution is as follows:

Borax	2 ounces
Ammonium phosphate	16 ounces
Water	1 gallon

The bags should be treated to this solution every few months, as they gradually lose their fire-resisting quality.—B. B. M., Ohio.

TIMING TANK DEVELOPMENT: I have just read the article with the above title on page 518 of the November issue; and, while Professor Fulton's idea of a supplementary minute hand being fitted to the face of the clock to be set ahead the desired number of minutes is quite ingenious, it seems unnecessarily complicated. Why not make it a rule to stop development on the even hour and then merely set one's "dollar alarm clock" as many minutes ahead of that hour as one intended to develop his negatives? This last is a method I have used for some time and found it very handy.—Roy G. Hillebrand, California.

BLUEPRINT CHEMICALS: For making blueprint paper, prepare the following solutions: Citrate of iron and ammonia, two ounces dissolved in eight ounces of water; and, red prussiate of potash, one and one-fourth ounces dis-

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solved in eight ounces of water. Keep the solutions in separate bottles. To use, measure equal quantities from each of the bottles and mix by shaking well. Keep the mixture away from white light, applying it to the paper in a room illuminated with ruby light. Dry the paper in this room, also keep it in the dark till used. One ounce of the mixed chemical will cover four square feet of paper.—L. B. H., Michigan.

SOME HINTS: A little ammonia in the water will make window cleaning easy. For a metal polish, mix up a small quantity of kerosene and vinegar and you will have one that will do the work.

A tablespoonful of ammonia and soap will remove machine grease from clothes.

To cut glass with a pair of ordinary shears, do the cutting under water, either by holding in a tank or under a faucet of running water. You can cut any shape desired.

To cut hard rubber, first soak in hot water till soft.

Ammonia is an excellent cleanser for porcelain, but when dirt or grease requires an extra agent, use a mild solution of nitric acid.

To remove bad odor from a room, place a piece of dried orange peel on a hot stove or old tin. Burned coffee is also effective. L. B. H., Michigan.

AN AID IN SIPHONING: I have one of the large white rubber bulbs that are generally supplied with large shutters such as are used in studios. I remove the black plug from one end, leaving the rubber tubing attached to the other. When I wish to empty anything by siphoning, I insert the tubing in the liquid, hold the bulb lower than the surface of the liquid, and squeeze out the air. Then, holding a finger over the hole from which the plug was removed, I allow the squeezed bulb to draw the liquid into itself and thus start the siphon working by its suction. This is a more pleasant way than the usual practice of using the mouth. I use this almost constantly on a print washing box that stands near my sink and it enables me to keep a constant stream of hypo laden water flowing from the bottom of the tank where the end of the siphon hangs, while fresh water runs in at the top on the opposite side.—James R. Leverett, Iowa.

FIREPROOFING FOR FLASH BAGS: To photographers who are at a loss to know what to use to fireproof flashlight screens and smoke bags, I can recommend the following formula: Take half a pound of ammonium phosphate and dissolve in enough water to make an emulsion-like solution. With this saturate the cloth thoroughly, but do not wring it out, hanging up wet on a line to dry. If it be cheese cloth for a screen it should be tacked to a stretcher to keep it flat and in shape while drying. I have tried this; and, testing the cloth saturated with this solution, found that it will not burn even if a lighted candle be used in an effort to ignite it. The cloth will turn black where the flame strikes, but will not burn or smoke.—G. S. SMALLWOOD, Illinois.

CLEANING FILM FROM OLD NEGATIVES: One frequently wants to clean the emulsion from an old negative in order to get the glass to replace a broken one in the printing frame or for some other purpose. The following method is the one I use. Wet the film side under the tap until the emulsion

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begins to swell; then, with a blotter immediately remove the surface water. Next, with a knife or with the finger nail, scratch a cross in the center of the wet film and start there and roll back the film with the thumb, working towards the corners or the edges of the plate. If just the right amount of water has been absorbed by the film, and a little practice will make this easy, it will roll back nicely and leave the glass almost clean. What little may remain can be removed with a knife and the glass then polished with a cloth. If the film is not wet enough, it will stick to the glass, and if too wet it will be soft and tear easily. This method occasionally fails, but is successful so often that a knowledge of it is valuable on account of its simplicity and quickness.—R. Frey, Iowa.

DEVELOPING STALE PAPER AND CARDS: I find that I frequently buy a supply of paper or cards and then fail to use it before it becomes long past date. However, I have no trouble with it when using a developer as follows:

Water	10 ounces
Acetone sulphite, Bayer's	300 grains
Sodium sulphite, dry	30 grains
Edinol	30 grains
Hydroquinone	15 grains
Potassium bromide	10 grains
Sodium carbonate, dry	400 grains

For use, add four ounces of water to each ounce of the above required to make the desired quantity. With this developer I get good, clear prints from paper so old that with an ordinary developer the surface simply turns gray or else mottled and mealy all over.—C. L. Fuller, Iowa. (I. P. A. 2810.)

UNSAFE RED ELECTRIC LIGHT BULBS: A friend, another amateur, has often complained of his bad luck in camera work, asking me to come around some time when he was developing his plates and see if I could figure out where the trouble was. Accordingly, I dropped in one evening and found him developing, using a sixteen-candlepower red electric light bulb as an illuminant. I asked him to get me an ordinary eight-candlepower lamp and some red and yellow tissue paper. Covering the weaker bulb with the red and yellow tissue paper and turning on the current, I developed a plate for him and it came out clear and brilliant. My friend has had no trouble with foggy negatives since then. The moral of this is that the red of the ordinary electric light globe is not of the right shade to prevent the passage of all the blue rays and the plates are fogged by the strong light. Using a weaker light and the red and yellow tissue prevents the passage of any blue and the plates are reasonably safe.—L. E. W., Nebraska.

FLASHLIGHTS OF CHILDREN: Mr. Maloney, in the April issue, gave us some fine examples of child portraiture by flashlight. In some of them the children are shown as holding a burning electric light bulb by the socket. Those who are so located that electric current is not available can secure the same results by using a dummy bulb and socket with a few feet of the regulation cord attached, drawing in the filament of the lamp, after the negative is dry, with pen and ink. Those making child portraits by flashlight will find this

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dummy lamp an excellent device for keeping the child interested and its attention away from the camera, the flash, or the operator. The child can be given the bulb, the cord apparently connected with the camera or the flash-lamp, and told to watch the bulb for the flash of light that will come and make the picture. This dummy bulb also has the advantage over the real electric light in this, that if the child moves it just before or just after the flash, it will not appear blurred as does the latter unless the flash and camera shutter are coupled up to work absolutely simultaneously.—P. W. Tooth, California.

A GOOD M-Q DEVELOPER: An excellent developer for gaslight papers is made as follows:

Water	20 ounces
Elon or Metol.....	15 grains
Hydroquinone	60 grains
Sulphite soda (desiccated).....	220 grains
Carbonate soda (desiccated).....	400 grains

Dissolve chemicals in order given and then add eighty drops of a ten per cent solution of potassium bromide. This developer will keep well if bottles are filled to the neck and tightly corked. Use full strength for regular Velox, but dilute with equal parts of water for special Velox, Azo, Argo and Cyko. Temperature sixty-five degrees Fahrenheit.—Geo. B. Ley, Ohio. (I. P. A. 3391.)

AN IMPROVED FIXING BATH: I have always used, until this summer, the old, regulation fixing bath for plates, films and paper, the one made by adding sulphite of soda, alum, and acetic acid to the hypo solution. I read somewhere that the alum-acid bath was out of date and that sodium bisulphite liquid was better and easier to use. I tried the different local photographic and drug stores, but could not find the soda bisulphite liquid. After a time I got some Merck's pure dry sodium bisulphite; and then the question was, how to mix it properly. After several trials and experiments I found the following to give the best results. First dissolve one pound of Merck's pure dry sodium bisulphite in sixty-four ounces of water. This is the clearing and hardening solution and keeps indefinitely. To make the fixing bath, dissolve one pound of hypo in sixty-four ounces of water and then add eight ounces of the bisulphite solution. In the very hottest of weather increase the amount of the bisulphite solution to ten or twelve ounces. There is seemingly no danger of sulphurization, no matter how much is used, where with the old-style bath I sometimes had trouble from that cause. It is cheap, the bisulphite costing here about twenty-five cents a pound. It is certainly easier to mix and the results are identical with the old bath. As we make many hundred prints each day there is a saving in time that is quite gratifying. There is no difference in the sepia tones secured later when this bath is used. I do not know positively as to the keeping qualities of the bisulphite solution, but have kept it several months without any appreciable deterioration. The sodium bisulphite should be as fresh as possible, as it does not keep well in the dry form after the bottle has been opened. I buy mine in one-pound bottles and dissolve the entire contents at one time. In my opinion, the bisulphite makes an ideal fixing bath.—Edgar O. Spaulding, Maine.



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A PHOTOGRAPHIC MONTHLY

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No. 3

Photography at the Panama-Pacific

The Directors of the Panama-Pacific International Exposition, to be held in this city February twentieth to December fifteenth, 1915, have formulated the general rules and regulations for the guidance of intended participants, and these have been finally amended and approved by the President. Although not officially announced, it has been decided that photography will not have a place in the Fine Arts Building, that department being only available to paintings and sculpture. This exclusion is not the result of any lack of appreciation by these directors, of the art quality of pictorial photography, but is made necessary by the inadequacy of the acreage at the disposal of the Fine Arts Department. In being placed in the Department of Liberal Arts, photography is but sharing the fate of architecture, ceramics, and other arts that were included with it in the Fine Arts Department at St. Louis and elsewhere. All possible was done to secure the arrangement we know would have been more appreciated, but the conditions were such that the determined classification was made imperative.

Some Pictures Wanted

Attention is called to the announcement facing back cover of this issue, by *Sunset Magazine*. The editor wants pictures that will suggest the attractiveness of out-door life in California and on the Pacific Coast. And do not run away with the idea that they want only masterly, artistic productions that portray immaculate dress, luxuriant ease and untroubled leisure, with a background of magnificent landscape. Take the chiquitas, the kids, in their jumpers and overalls, playing amongst the flowers or the fruit; take the sister with the chickens or the garden growth about her; take anything that has some suggestion of the out-of-doors life that our equable climate makes such a matter of course with us, but which is so little enjoyed by our less fortunate Eastern friends. Send them in. Art Editor, *Sunset Magazine*, San Francisco, will suffice as an address if you have forgotten the rest. If you are real modest about your own work and somewhat in doubt, send them to us and we will give you the benefit of our suggestions as to their possible suitability,—but send them in. You will not only invite a few dollars' return for your work, but you will help invite our Eastern friend to pay us a visit and perhaps remain.

Mr. Rosin on the Coast

S. M. Rosin, of the Rotograph Photo Paper Company, is making a tour of the Coast and favored our office with his genial presence for a brief period during the last week of January. Mr. Rosin reports sales of their paper as

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constantly increasing in a most gratifying way; and, what is even more satisfactory, an entire absence of any other complaint than that dealers at this distance are occasionally unable to supply every size, grade and surface that may be demanded. The line is an extensive one and our Pacific Coast users should remember that the difficulty is one that can only be minimized except as they may assist their dealers by anticipating their own wants as much as possible.

Mr. Willis Reports Business Excellent

H. P. Willis, the enthusiastic and energetic exponent of Graflex Superiority, has just returned from an extended trip through the Pacific Northwest and reports business exceptionally good throughout the entire section. He advises that an announcement of an additional building being erected to take care of the increased orders can be expected from Rochester as soon as his orders begin to reach there as they should. The heavy snows have perhaps delayed their receipt for a few days. Mr. Willis has made a host of friends since he came to the Coast, and the increased demand for the Graflex line is no doubt due in no small measure to his hard work and enthusiasm.

Mr. Shirpsier Returns from Trip East

Maz L. Shirpsier, President of the Sunset Photo Supply Company of this city has recently returned from an extensive trip through the East, where he visited all the large manufacturers of photographic goods, inspecting all the new models, and investigating all the new material. Many orders were placed and the new goods are arriving daily, making the store well worthy of a visit of inspection.

Our Agent in London

Francis Collas, with offices at 3 Wine Office Court, Fleet Street, London, E. C., has been appointed British Agent for the sale of this magazine in the United Kingdom. He has asked us to announce that CAMERA CRAFT will be obtainable of any bookstall or news agent in the United Kingdom as fast as distribution can be arranged. This will, we trust, prove gratifying to those good friends in England who prefer to purchase CAMERA CRAFT as they do their other or home publications of a photographic nature.



A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Physical Development of Lantern Slides

Raymond C. Crowther, writing in *The Amateur Photographer*, strongly advocates the making of lantern slides by physical development. He states that slides so made possess much better gradation than chemically developed plates; that the shadow detail is less blocked and that the whole slide shows the well-known excellence of the old wet plate process. As to method, he says:

After many experiments, the writer is able to give as examples the following formulae for physical developers, which fulfil the desired conditions:

- | | |
|---|-----------|
| I: Amidol | 5 grains |
| Sodium bisulphite..... | 7 grains |
| Water,boiled or distilled, to | 1 ounce |
| II: Diamidophenol | 4½ grains |
| Sodium bisulphite..... | 5 grains |
| Water,boiled or distilled, to | 1 ounce |
| III: Paramine, parapheny-lene-
diamine base..... | 5 grains |
| Sodium bisulphite..... | 10 grains |
| Water,boiled or distilled, to | 1 ounce |

Unless very excessive over-exposure has been given, the above solutions may advantageously be used at sixty-five to seventy degrees Fahrenheit. Density must be judged by transmitted light only.

In every case the amount of bisulphite taken must be sufficient to render the solution acid; it must turn blue litmus red.

These developers, by virtue of containing sulphurous acid, are able to act as solvents of the unchanged silver salt. When the solution occurs, the developer tends to reduce the salt and precipitate metallic silver, but it cannot do so without the aid of the invisible image, thus wherever the light has acted deposition commences, and as the deposition is virtually taking place from solution, every light-affected particle, whether in the highlights or shadows, gets the same amount of silver brought within its grasp.

Exposure, therefore, within very wide limits, governs contrast, and time of development governs density, when constant developing conditions as to composition and temperature are used.

With a given exposure, on the other hand, acceleration of the deposition by using the solution warmer and dilution of the solvent give flatter results than cold full strength development.

In addition to the above he says that the developer supplied for the Hydra plate is capable of giving the same results. I have tried the first of these developers and the results were very interesting. Taking a negative of medium density, I gave an exposure of about triple the normal, and developed with the amadol developer at seventy degrees. After half an hour there was a mere trace of deposit, and, it being late, I covered up the dish and went to bed. Forgetting the plate until 2 o'clock the next day, upon examining it I found a rather feeble and poorly developed image on the plate. Washing it and placing it in acid hypo, I obtained a lantern plate of white appearance by reflected but warm black by transmitted light, and of excellent gradation throughout. Compared with a plate made from the same negative and developed in the ordinary way it had much the advantage.

A New Method of Sepia Toning of Bromides by Colloid Sulphur

As is well known, large and general use is made at the present time of mixtures which produce sulphur in the nascent state at the time of use. In such mixtures, on application of heat, the black silver image of a bromide, or gaslight, print is converted into one of brown colour without any production of yellowness in the highlights. Toning by means of a hot mixture of hypo and alum is never found to give rise to yellowing of the lights, whilst, in the case of cold toning with alkaline sulphides, there is invariably

yellowing of this kind, however the toning process is carried out.

The method which has hitherto been widely used on this principle is that in which a mixture of hypo and alum solution is employed, the sulphiding action of which on the silver image takes place at a temperature of about one hundred and seventy degrees Fahrenheit. Such a heat requires not only a preliminary hardening of the gelatine film in order to prevent the emulsion from running, but also introduces a number of difficulties in the manipulation of the prints. We have, therefore, endeavored to dispense with these drawbacks by effecting the complete sulphiding of the silver image in the cold by producing the nascent sulphur in the colloidal state.

In order to obtain this colloidal sulphur at the moment of its liberation in the nascent condition, we use a mixture of hypo with a colloid substance, such as albumen, fish-glue, dextrine, gum arabic, etc., and add to this mixture, prepared in water or alcohol, such as hydrochloric acid, which decomposes the hypo and liberates sulphur. The sulphur does not deposit from the solution, but remains in a state of extremely fine division, provided that the proportions of hypo, colloid, and acid are correctly chosen.

We have found that the best proportions for giving the desired result are as follows:

Hypo	10 grammes
Dextrine, 50 per cent. solution	5 grammes
Water	20 grammes

Shortly before use in toning there is added to this solution one gram of tartaric acid.

This mixture, which at first is colorless and clear, gradually becomes milky, but the sulphur does not deposit from it even after many hours. The prints on bromide or gas-light paper or being immersed in the bath do not appear to undergo any change. But if after remaining in the mixture for from twenty to twenty-five minutes they are put to wash for a considerable time, the color gradually changes into brown, and, after washing for about an hour and a half, the final tone is reached without the slightest yellowing of the whites. The warm brown tone thus obtained exactly resembles that secured by treatment with a mixture of hypo and alum.

The hydrochloric acid decomposes the

hypo-forming sulphur and sulphurous acid, the sulphur remaining in the colloidal state.

It may be assumed that this very finely-divided sulphur is retained by the gelatine of the paper and acts on the silver under the influence of the wash-water.

It is curious that the color of the image should become apparent only during washing with water. If, during this part of the process, the prints rest on one another at various points it will be found that the parts which thus are in contact are not affected by the wash-water, and untuned patches result. This defect can be remedied, even in the case of prints which have been put aside for a long time, simply by again soaking them in water and washing; the toning action then takes place in the parts where it has previously failed, and the image becomes of one uniform tone without a sign of patchiness.

We have found that in the formula given above the acid, or bisulphate, can be replaced by alum, the separation of sulphur then taking place very slowly, and the toning process then requiring a much longer time than with acids or bisulphate. Nevertheless, a certain proportion of alum may advantageously be added to the bath for the purpose of hardening the gelatine film, and thus safeguarding it when working in hot weather. Under the name of *Virage Sepia* a mixture containing the necessary elements in the solid form is being placed upon the French market under the protection of a French patent. The mixture consists of hypo, dextrine, and sodium bisulphate; it yields colloidal sulphur simply by dissolving in water, and permits of brown tones being obtained in the cold exactly similar to those which are secured by hot hypo-alum toning. — Lammé and Savoyet in *British Journal of Photography*.

Transferring the Picture from Printing-Out Paper

The following note by Joseph Clark, in *Photography*, seems promising and worth trying. He says:

After the print is fixed and washed it is ready for transferring. A piece of dry, white blotting paper, or other absorbent material, is laid down on a smooth surface, and the print, after draining it for a moment, is laid down upon this, another piece of blotting

A PHOTOGRAPHIC DIGEST

paper is laid on the back of it, and a warm iron is then passed all over its surface. One or two rubs with the iron are quite sufficient. Then if the uppermost piece of blotting paper and the paper of the print are picked up by one corner and gently peeled off the first piece of blotting paper below, it will be found that while the paper comes away readily the picture itself has been transferred. The stripping must take place as soon as the iron has gone all over the print, as the heat melts the gelatine next the paper and so liberates the latter, and this must be removed before the gelatine sets again.

It will be found that the character of the picture is influenced very largely by the extent of the ironing. If this should be overdone the picture becomes very coarse and grainy; if it is not sufficiently ironed, of course, it will not strip. If one does not go over the whole of the print with the iron, it will tear off in the attempt to strip it. By one rub with the iron, I mean passing it once across the print—by two rubs, once across and then back again. If the prints are to be transferred they should be made a little darker than usual. One must hold down the lot firmly while ironing, and press the iron well down. The transferred picture can be rubbed or scratched with the finger-nail without leaving a mark.

There seem to be great possibilities before this very simple transfer method, and it should enable many to try variations which would show how far those possibilities extend. There does not seem to be any reason why the transfer should not be made to other papers besides the blotting paper, which the writer has been using, and it is probable that pictures could be put down upon carbon transfer and other papers, which would give the user a wide range of surfaces. It is plain that whatever is used must be more or less absorbent, or the print would not adhere properly, but this is the case with the various transfer papers that are used for carbon.

The complete absence of anything like a gelatine layer or a glossy surface to the transferred print will appeal to those who do not care for the ordinary p. o. p. print. By getting rid also of the paper which has been through the various chemical baths used in finishing the print, one might fairly expect that the permanence of the picture would be increased, provided also that the paper to

which it is transferred contains no deleterious material. In addition to the use of various papers as supports, one might try how far the method is applicable to other photographic prints, to self toning, gaslight and bromide papers, for example.

Important to Exhibitors

The following excerpts from a lecture by S. Hearst Seager, reported in the *British Journal of Photography*, will interest intended exhibitors. The speaker said:

The great desideratum is, of course, the securing of full light on the pictures without reflections; this requirement can only be fulfilled in a well-designed gallery. To secure all the necessary conditions it is essential, first, that spectators shall not be able to see reflections of the windows in the pictures themselves. Whether this occurs or not depends a great deal on the height of the gallery, which matter, of course, can only be controlled by the designer, and not by the user of the gallery. Many galleries could be vastly improved by raising or lowering the floor; but a similar result can be more or less successfully brought about by judicious hanging, that is, by selecting the right height for the pictures, and by adjusting their hanging angles according to their height. The pictures must be so inclined that the reflections of the windows or skylights are directed, not to the eyes of the spectators, but to the floor. Unfortunately, photographic hanging committees seem to neglect this question of angle altogether, and, either out of ignorance or to save themselves trouble, they do not hang the picture at all, but simply fix them flat against the wall. This is quite useless for pictures which are either above or below the eye-level; the only workmanlike method is to make the former slope forwards out from the wall, while the latter slope backwards towards it.

The second consideration after that of window reflections is that of reflections from the floor and from brightly illuminated objects within the room. Here again in a properly designed gallery there will be no bright light on the floor, but only on the pictures, and consequently there will be no reflections; but in the average gallery as we have to deal with we find a skylight and often a brightly illuminated polished parquet floor—that is to say, the worst possible conditions are found together. In such a case,

if the skylight is the only light we cannot block it out, though if it is the top only of a lantern light we may be able to do so with advantage. Very seldom also can we make any use of a velarium to shade the floor. Therefore, in nearly all such conditions, the only course is to cover the floor with some dark light-absorbing patternless material. The walls also are invariably light-reflecting surfaces, and hence they should be covered with a dark material similar to, though not necessarily the same as, the carpet. When these arrangements have been completed the pictures should be more brightly illuminated than any other things in the room, but they will not, of course, be as well lighted as they should be, unless the gallery is so designed as to throw the maximum of light on the walls at the right height.

In the ordinary gallery, try as we will, we cannot get away from reflections in some part or other of the exhibition, and here it should be remembered that reflections are always at their worst in dark pictures, while they give the least trouble in light pictures. Therefore, the darkest pictures require the best positions, while only the lightest pictures should be hung in places where reflections are inevitable.

Very often, of course, photographers have to put up with side-lighted rooms, and in these the main trouble is insufficient light on side walls at a distance from the windows, and overpowering reflections on walls facing windows. For the latter trouble there seems to be no remedy other than that of angling the pictures, but the former may be got over to a considerable extent by hinging the pictures to the walls so that they may be set at a horizontal angle.

A very important thing to note with side-lighting is that pictures showing in themselves effects of side-lighting can only be seen properly on one side of the room. For example, if a head study shows right-hand lighting it must be hung so that the picture is illuminated by light from the right. If it is hung on the wrong side of the room the effect will be incongruous. With top-lighting we need not consider the lighting as shown in the picture, though by a little judicious selection we can avoid the elementary blunder of hanging together pictures that show quite opposite lighting schemes. It is interesting to note that Mr. Seager, in his

study of various European galleries, found a Wynne meter of the greatest assistance in determining the relative values of the illumination in different parts of a gallery. With such a meter it is, of course, quite easy to tell whether the strongest light in the room falls on the pictures or not, and, this being such an important factor, a great deal of useful information can be gathered in a very few moments.

Photographic Supplies in Germany

According to a published estimate, the capital invested in the German photographic industry amounts to about fifteen million dollars, without taking into consideration large sums employed in the intermediary trade between the manufacturers and consumers. It is said that there are about four hundred factories engaged in the production of photographic materials and accessories. Among these are twenty-five manufacturers of optical goods, five chemical works, twenty-eight makers of photographic paper, thirty-one dry plate factories, twenty-eight factories manufacturing cameras of all descriptions, and two hundred factories making various accessories.

The manufacture of dry plates has long been an important one in Germany, and the home demand has been largely supplied from domestic sources. Until recent years, however, German manufacturers have not paid much attention to the production of film cartridges, even for use in cameras designed particularly for amateurs. The present supply of films is still largely of foreign, chiefly American, origin, but it is noted that the domestic supply is constantly becoming more ample. The three chief domestic manufacturers of films put up in cartridge form are located at Berlin Steglitz, Berlin, and at Frankfort on the Main.

An official of the Verein der Fabrikanten Photographischer Artikel, or Association of Manufacturers of Photographic Articles, states that German film manufacturers are neither allied with nor controlled by manufacturers in foreign countries. They are, however, more or less closely allied with each other, as all are members of the above-mentioned association, which devotes itself chiefly to the support of the German export trade in photographic articles.—Vice Consul General De Witt C. Poole, Jr., in *Consular Reports*.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Making Telephoto Negatives

An Ohio reader has had poor success in getting some degree of "snap" into his telephoto negatives, the tendency being for them to be flat and lacking in contrast. This difficulty can be somewhat overcome by using a shade on the front of the lens, one that allows only the actual rays that strike the plate to enter the camera. This means a funnel-shaped cone having its larger end of a form corresponding to that of the plate, that is, proportional to its length and breadth. Another means of securing better negatives is to take advantage of the well-known tendency of some orthochromatic plates to give hard and contrasty negatives upon prolonged development. When a view is at a distance the contrast is quite small, due mainly to the intervening atmosphere. Orthochromatic plates developed with a well-restrained pyro developer will give very good results, particularly if a weak color screen has been used. Telephoto negatives, in developing, act much like cases of over-exposure. Even with the treatment recommended they will no doubt seem too gray all over at an early stage of development, but this can be disregarded and development continued, examining the glass side of the plate to determine when development has proceeded far enough. Should it be found that actual over-exposure is present, the resultant negative should be subjected to a treatment of the ordinary Farmer's reducer, one that acts most strongly upon the shadows and in so doing increasing the contrast. In fact, it might be advisable to intentionally over-develop the negatives and then give them a treatment of the reducer, just to get this increase of contrast that may not be secured with the straight development alone.

An Unsuspected Market

One of our subscribers in the Middle West has secured a large number of fine landscape negatives of scenes near his home town. He recently sent samples and wrote asking if I could suggest any means of deriving some

profit from them. I suggested, in view of the character of the work, that he submit proofs to the advertising department of the railroad that passed through his territory, together with an offer to supply either prints or the original negatives, or to make other views of a similar kind. A letter just to hand advises that he has sold a number of negatives at a good price and secured an order to make a series of others that will bring him quite a nice little sum. Of course, I have no desire to be guilty of creating a flood of unavailable prints at the doors of the advertising men of the various railroads. Before sending prints one should examine some of the booklets and the like that their railroad has gotten out, in order to form some idea as to what is most likely to be wanted. Perhaps it would be better to consult someone who might be expected to know what might be acceptable. The publisher of one's town paper should be able to advance an idea or two on the subject. But the average railroad uses a great many photographs and is just as willing to buy them from the man who is on the spot and in a position to take the views when the conditions are all at their best as they are to send their own photographer after them and be under the disadvantage of having to use what may result, regardless of conditions at the time. The literature gotten out by some railroads is quite varied and, of course, requires a wide range of subjects. Farm scenes are used to encourage people to seek new homes, other views to suggest the charm of the territory as a fitting place for vacation travel, and so on through a more or less comprehensive list, depending upon the character of the country that the railroad passes through.

A Simple Studio Building

A correspondent in the southern part of the State wishes to erect a small studio and dark room, at one side of his residence, some time during the summer, and writes me for suggestions thereon. The building must be

neat enough not to be objectionable on his fairly well kept grounds, and yet be inexpensive enough to cause no deep regrets in case it fails to give the expected amount of delight and satisfaction. It should be large enough to contain the photographic impedimenta of the average amateur, suitable space for developing and printing, with an operating room and dressing room of sufficient size to pass muster when his friends are asked to submit to his portrait making proclivities. In my opinion the structure should be about twenty by thirty feet, but further than that I do not feel safe in advising as an authority. In our California climate, as my correspondent points out, there should be any number of such detached photographic structures, and he believes I should be acquainted with the good and bad points of several forms. Unfortunately, he is mistaken as to the last. It seems that he should be right as to the first, and I would be pleased to have any of our readers, no matter whether residents of this State or otherwise, who may have had experience with such a structure, write and tell me about them. It is easy to imagine such a building, but I would prefer to have the description of one that has actually been built and used, along with some suggestions as to how it could be improved or changed, what alterations have been suggested by use, and the like. If I can get a few such descriptions from our readers, together with drawing or photographs showing the construction, I would be more than pleased to embody them in an article that I am sure would prove of great interest to a large number of our readers. If you know of such a building or have one in mind, send along a description thereof, together with comments and suggestions thereon.

Another Market

Another letter just to hand reports the most gratifying results from the following of a suggestion I gave a reader nearly a year ago. The gentleman wanted to get up some Christmas cards and did not quite like his plan of former years, that of using prints with borders of ornamental design. Our suggestion was that he get some sprigs of holly and dust them well with flour, using a sifter to put it on, and then photograph bits, sprays, branches, and a border made up of individual leaves so whitened. This was advised mainly because he complained that his

former productions seemed to lack the Christmas or winter appearance that seemed necessary. Being somewhat artistic in his method of arranging things, he achieved a marked degree of success, with the result that he was called upon to turn out hundreds of cards and calendars for his local art store, work that found a ready sale and work that practically prevented the sale of other like goods until it was all disposed of and out of the way. Were it not so far in advance of the season I would have a few examples reproduced on this page, but my idea is simply to call attention to the matter in good time so that those who wish to try the plan can provide themselves with the necessary material by getting a small holly plant from their nurseryman this spring and giving it care during the summer. In that way one will be independent of the usual Christmas supply which arrives only after one's time would be too fully occupied to allow of making negatives and going through with all the work in time for mailing or sale. Raise your holly this summer, make the negatives this fall and then you can print the cards early in the winter and be all ready to send them around and perhaps dispose of a few of those having a less personal character to your local stores.

Arranging Flowers Photographically

It will not be long before the first flowers of spring begin to make their appearance and many of our readers will start their photographic work for the year with these pleasing subjects. The catalogues of the seedsmen have been coming to hand and those who are interested in photography will do well to send for a few in order to study the reproductions therein. While these examples of flower photography are not always of the best, they contain many lessons that are worth while to the beginner in the work. The principal one, perhaps, is the fact, obvious when it is realized, that the arrangement for a photograph is somewhat different from the natural one that it appears in the reproduction. Look at the examples shown and you will see that what seems so natural is, in reality, a very fan-like arrangement that would look well only from the direction in which it was taken. Just look at any pleasing example and imagine how it would look from behind or even from one of the sides. Then you will begin to understand why your own arrangement has failed to be pleasing in

CLUB NEWS AND NOTES

your pictures. And another thing that is worthy of consideration is the pleasing effect produced by arranging a group of blossoms much as one would go about securing a pleasing grouping of several people. In a good group picture one individual is allowed to dominate and the others are given variety by having their faces turned at different angles or so arranged that a number are higher or lower than their neighbors. Study over these

reproductions of photographs and you will get many good suggestions therefrom. Of course, the reproductions of drawings and the lithographic pictures in colors are not so good for the purpose, but the reproductions of actual photographs can be easily recognized and they are generally the work of some photographer who has a good knowledge of the best arrangement of such subjects.

CLUB NEWS AND NOTES

**Club Secretaries and others will oblige by
sending us reports for this Department**

Chicago Camera Club

Photographers accustomed to enlarging through condensers with an arc light which frequently varied in intensity, even while exposures are being made, would find great pleasure in using the enlarging rooms now fitted up in the new quarters of the Chicago Camera Club at 329 Plymouth Court. The arc lights, with their attendant troubles and uncertain results, have been thrown out; the condensers, covering only 5x7 negatives, have been sold, and Cooper-Hewitt lights installed in their stead. These consist of tubes, ten inches in length, arranged in batteries of three, so spaced as to cover 8x10 plates. Each battery is contained in a ventilated, light tight box, placed between two enlarging rooms, thus serving two enlarging cameras at the same time. It is necessary to tip the tubes in order to turn the light on, this being accomplished by means of a brass crank in either room. There is a spring device within the enclosing box to take up shock and prevent breakage. Each battery of lights is so wired that two switches, one in each room, must be turned to extinguish it, thus preventing a worker in one room turning out the light while the occupant of the other room might be exposing. A further improvement is the doing away with ground glass for diffusing, using instead a "flashed opal" glass imported from Germany and which has diffusion powers equal to three sheets of ground glass with absorption equal to but one.

The apparatus illuminates an 8x10 negative evenly and brilliantly from its center to the extreme corners and produces evenly exposed prints, free from any trace of image of the tubes, in about ten per cent less time than was necessary with the arc and condenser system. The lights cost approximately fifty dollars to install, showing a considerable saving over the arc and condenser system, especially for large sizes, particularly so when it is considered that each light displaces two sets of expensive condensers. The space saved is also quite an item, the Cooper-Hewitt light and diffusing glass occupying less than one-third the room necessary for the arc and condensers. Reduction of fire hazard to practically nil is also of considerable importance. The new light shows a marked economy in operation, consuming on a one-hundred-and-ten-volt circuit but three and one-half to four amperes; amounting, at a flat rate of ten cents per kilowatt hour, to about four cents per hour. The arc consumed about seven amperes, nearly double the expense. The Camera Club has installed two batteries of three tubes each, these operating three enlarging rooms and one lantern slide room most satisfactorily.

Toronto Camera Club

You are invited to submit prints for the Tenth Salon, the twenty-second annual exhibition, of the Toronto Camera Club. The rules and regulations, abridged, are as follows:

CAMERA CRAFT

All pictures must be mounted, but not framed.

Each picture must be the entire work of the exhibitor.

Each person must place a *nom de plume*, a title, and a number on the back of each mount, sending at the same time, in a separate envelope, name and address with *nom de plume*, so that the prints may be identified by the secretary-treasurer.

Any number of prints may be submitted, but only such as in the opinion of the jury of selection show distinct artistic merit will be selected.

A gold medal or plaque will be awarded to the best print in the Salon; also a silver and bronze medal, or plaque, will be awarded by the jury of selection to the two best prints in each of the following classes: Portraits, landscapes, genre and marines.

Pictures must be delivered, charges prepaid, to the Secretary, Toronto Camera Club, No. 2 Gould Street, Toronto, Canada, and must reach club rooms not later than Friday, April eighteenth, 1913. Exhibits from points outside of Canada must be sent by post. Entry forms will be mailed upon request to Edward Y. Spurr, Secretary-Treasurer, No. 2 Gould Street, Toronto, Can.

Photographic Art at Seattle

The annual exhibition of photographic art opened Wednesday, January fifteenth, in the galleries of the Washington Art Association, on Fifth Avenue, with sixteen exhibitors displaying one hundred and ten examples of artistic photography from Seattle and throughout the State.

F. H. Nowell is represented by landscape work, chiefly in Alaska; G. H. Braas, Aiko, E. S. Curtis, F. A. Jacobs, F. C. La Pine, Christy, Harry Field, H. M. Deig and Mrs. A. G. Snow by examples in portraiture; Dorothy E. Edwards, of South Bend, has some excellent woodland scenes; A. Benjamin Smith shows two Indian heads, Shoshone and Nez Perce, of rare dignity; Miss S. Grant has "Candlelight," some other pieces of still life, and "Off the Yacht Club;" Asahel Curtis, some mountain views.

J. R. Monfort, of Chehalis, records the groves, fields and trails of that vicinity, and Mrs. Myraa A. Wiggins, of Toppenish, has some finished productions, entitled "At Work," "The Edge of the Woods" and "Still Life." E. S. Curtis shows a novelty in por-

trait work—a lunette, "The Hopes of Youth," and a design for stained glass window and mural decoration entitled, "Ambitions of Youth," evolved by A. S. Muhr.—*Seattle Post-Intelligencer*.

Winnipeg Camera Club

The Third Annual Exhibition of the Winnipeg Camera Club will be held in Winnipeg, Canada, from May seventh to tenth, inclusive. Exhibits are invited and they should be delivered to the Secretary, Winnipeg Camera Club, Enderton Building, Winnipeg, Canada, on or before the twenty-first of April with an entry form mailed separately, to reach the Secretary before that date. Entries from points outside of Canada should be sent by mail to avoid customs formalities in receiving and returning them. All pictures must be mounted but need not be framed, and each must bear the title, the exhibitor's name and address on the back. Gold, silver and bronze medals will be awarded to the three best pictures, and certificates will be awarded to those receiving honorable mention. In addition there will be the McMillan Challenge Cup to be awarded to the best picture by a member of the Winnipeg Camera Club, the winner holding this cup for one year. Entry forms can be obtained on request from the Secretary, J. M. Fredale, Enderton Building, Winnipeg, Canada, or should time not permit a simple list of the titles, under the exhibitor's name and address, will answer the purpose.

The Northern Exhibition

The catalogue of the Northern Photographic Exhibition, held by the Manchester Photographic Society, in connection with the Liverpool Amateur Photographic Association, at the City Art Gallery, Manchester, England, January fourth to February first, is just to hand. It is deserving of all praise as a catalogue of what is evidently a most successful exhibition. The pictures number over six hundred, and in addition a large display of pictorial lantern slides, screen plates and the like were shown. Some half dozen Canadian and a slightly larger number of American workers were represented. This poor showing from this country is no doubt due to the fact that so few of our workers realize the importance of this most successful yearly exhibition, one that ranks but little if any below those held in London.

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NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smythe, 1160 Detroit St., Denver, Colo.

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Texas—Emmett L. Lovett, Roby.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

California—W. E. Thomson, 3540 School St., Fruitvale, Oakland.

Idaho—Eugene Clifford, Weippe.

Indiana—R. A. Underwood, 912 E. 15th St., Indianapolis.

Kansas—H. H. Gill, Hays City.

Missouri—J. F. Peters, Room 210, Union Station, St. Louis.

New York—Louis R. Murray, Ogdensburg.

Oregon—F. L. Derby, La Fayette.

Wisconsin—F. W. Freitag, 500 Monument Square, Racine.

Mississippi—George W. Askew, Jr., 211 34th Avenue, Meridian.

NEW MEMBERS

3536—Chas. J. Lynn, 133 N. Laurel St., Bridge-ton, N. J.

Class 2.

3537—Uri Mulford, 30 Jennings St., Corning, N. Y.

4x5 and post cards, developing paper, of hunting, fishing, lumbering, Niagara Falls; for city, marine and Western views. Class 1 for photos and lantern slides.

3538—George H. McLavey, 234 Mary St., Utica, N. Y.

5x7, developing and printing-out papers, of roadways, rivers and landscapes. I am deeply interested in tinting photos, using Windsor & Newton moist colors and would like to exchange and work up the same subjects with some one to get his idea and he mine by exchanging. Class 2, except for tinted photos.

3539—Emil F. Messing, Mist, Ore.

3¼x5½, various papers, of landscapes and mountains; for landscapes, buildings and street scenes. Mostly post cards. Class 1.

3540—J. W. Holt, 433 7th St., Portland, Ore. Class 3.

3541—B. F. Smith, Tygh Valley, Ore. Class 2.

CAMERA CRAFT

- 3542—Nathaniel Frucht, Coast and Geodetic Survey, Manila, P. I.
4x5, developing and printing-out papers, of general Philippine and ocean views; for industrial and manufacturing processes and methods, also interesting views in manufacturing or scientific lines. Class 1.
- 3543—C. E. Fehlman, Tagbilaran, Bohol, P. I.
1x5, developing papers, of athletics, scenes in the Philippine Islands, landscapes, marines and general native life; for athletic views or speed pictures, indoor photography, and landscapes. Class 1.
- 3544—Max Blochwitz, Zollner St. 19, Dresden, A., Germany.
Class 2.
- 3545—Ina L. Cook, 38 W. Council St., Tucson, Ariz.
Class 2.
- 3546—Leroy G. Gates, R. F. D. No. 3, Box 7, Oshkosh, Wis.
3½x4½, 4x5 and 6½x8½, developing papers, of many parts of Mexico and United States mining towns, smelters, navy yards, canyons, flying machines, erection of large power machinery, attractive home exteriors, and some speed work; for notable persons, events, racing motor boats, flying machines, battleships or liners, modern Cornell University views, including the "Old Man's" crews. Class 1.
- 3547—John A. Puett, Box 222, Colfax, Ill.
Class 2.
- 3548—Frederick B. Sanford, Botham, Ore.
3½x5½ and 1x5, developing papers, of landscapes; for anything of interest. Class 1.
- 3549—Joel Atkinson, P. S. S. "Cincinnati," Asiatic Station, via San Francisco, Cal.
From 2½x4½ to 5x7, also post cards, developing and printing-out papers, of marine views, man-of-war scenes, also views of China and Philippine Islands, for views, portraits or any interesting subjects, and child studies. Class 1.
- 3550—W. V. Shumaker, Tolleston, Ind.
Class 2.
- 3551—Harry W. Miller, Granby Farm, Paw Paw, Mich.
4x5, printed on post cards only, developing paper, of farm life, farm subjects from Michigan's fruit belt, and landscapes; for farm operations, etc. Post cards only. Class 1.
- 3552—Wesley R. Masten, No. 1 Lambert, Lambertville, N. J.
4x5, various papers, of old bridges, scenes along creeks, and other landscapes; for landscapes, old ruins, animals, or anything interesting. Class 1.
- 3553—Jasper Younkin, 36 S. Valley St., Kansas City, Kan. Post cards. Class 1.
- 3554—L. N. Scarles, Sioux Falls, S. D.
Class 2.
- 3555—Jesse A. Bunch, Loveland, Colo.
All camera prints up to 2½x2½, average size 5x7, various papers, of view work in particular and any general line of work; for all kinds. Class 1.
- 3556—Otto W. Hagel, 1042 Denver Ave., Los Angeles, Cal. Class 2.
- 3557—Otto L. Guenther, 3130 S. 40 Court, Chicago, Ill.
4x5 and smaller, developing and printing-out papers, will furnish special subjects as requested by correspondent; for Western scenes. Class 1.
- 3558—P. J. Ryan, Box 1536, Prince Rupert, B. C., Canada. Class 3.
- 3559—M. K. Wigton, 240 Blandena St., Portland, Ore.
5x7 and post cards, various papers, of miscellaneous subjects; for the same. Class 1.
- 3560—Mrs. Cena Kenney, Box 662, Perry, Wyoming County, N. Y.
3½x5½, developing paper, of views of Genesee River Valley; for views of Western mountains, rivers and lakes. Class 1.
- 3561—C. H. Lasater, 651 Ann St., Hammond, Ind.
Up to 5x7, developing papers, of landscapes and general views; for all kinds. Class 1.
- 3562—M. O. Wing, Callender, Iowa.
3½x5½, developing paper, of miscellaneous views; for the same. Post cards only. Class 1.
- 3563—Louis E. Niemann, Waltz, Mich.
Post cards, developing paper, of miscellaneous subjects; for the same. Post cards only. Class 1.
- 3564—Ralph Knotts, Albany, Ore.
Class 2.
- 3565—Chas. E. Weeks, 224 Yonge St., Toronto, Ont., Canada.
Postal size, developing papers, of general views, moving subjects, athletics; for speed work taken with anastigmat lenses. Class 1.
- 3566—J. Gaby Byrd, care Chicoira College, Greenville, S. C.
Post cards. Class 1.
- 3567—Thaddeus Hallman, Winter Haven, Fla.
2½x4½, various papers, of amateur portraits in and outdoors, fakes and odd pictures; for the same, also flashlights. Class 1.
- 3568—George W. Tensdale, Kennett, Cal.
5x7, 6½x8½, various papers, of mountain and river views. Can give copper smelting operation photographs; for all mechanical, railroad, steel works, wrecks. Permission to publish exchange subjects in illustrated articles must be included with the exchanges; due credit will be given the member if name is on back of photograph; no copyrighted photographs accepted. Class 1.
- 3569—Henry Guvaz, Medicine Lodge, Mont.
3½x4½ and 2½x3½, developing paper, of amateur views; for Western scenes and landscapes. Class 1.
- 3570—H. C. Orr, 227 North 7th St., New Philadelphia, Ohio.
Class 3.
- 3571—David C. Bloom, 2734 Army St., San Francisco, Cal.
Class 2.
- 3572—Herman Oldson, 1118 So. Leavitt St., Chicago, Ill.
Class 3.
- 3573—La Grande Mills, R. F. D. No. 3, Watkins, N. Y.
3½x5½, printing-out and developing papers, of landscapes, views of the famous Watkins Glen, and view of central New York; for anything of interest, especially landscapes, not persons. Prints and post cards. Class 1.
- 3574—Samuel E. Lee, R. F. D., Hammond, N. Y.
Class 3.
- 3575—John D. Johnson, 938 W. Grant St., Phoenix, Ariz.
4x5 and 2½x3½, developing and printing-out papers, of mountain scenery, street scenes, landscapes, Indians, etc.; for scenery, buildings, marines, or any educational subject. Class 1.
- 3576—E. J. Campbell, Box 103, Fairlee, Vt.
Up to 8x10, various papers, of scenery and street views; for scenery in general. Desire only to exchange with Southern and Western members in sizes 5x7, 4½x6½, and 4½x5½. Class 1.
- 3577—Ira Lamb, Sargent, Neb.
2½x5½ and 5x7, of developing papers, of landscapes, cloud effects, and home portraiture; for views. Post cards and 5x7 prints. Class 1.
- 3578—Edgar Martin, R. F. D. No. 2, Box 191, Hemet, Cal.
Post cards and up to 5x7, developing papers, of farm scenes, landscapes, and public buildings; for mountain scenes, historical and general views. Prints and post cards. Class 1.
- 3579—M. E. Gants, 1001 W. Main St., Newton, Iowa. Class 2.
- 3580—Lester A. Royal, M. D., 315 West 5th St., West Liberty, Iowa.
3½x4½ and 5x7, various papers, of all kinds of views; for child life, animals, and landscapes. Class 1.
- 3581—Fred E. Tayler, R. F. D. No. 1, Oakland, Iowa.
2½x3½, developing paper, of interesting scenes; for the same. Class 1.

OUR BOOK SHELVES

3582—Mate Motz, Oakland, Iowa.
1 $\frac{1}{2}$ x2 $\frac{1}{2}$ (3a Bromide enlargements) and 3 $\frac{1}{4}$ x5 $\frac{1}{2}$, developing paper, of rural landscapes, streets, etc.; for streams, lakes, and marines. Class 1.

3583—Paul W. Barber, Box 235, Bluff City, Kan.
3 $\frac{1}{4}$ x5 $\frac{1}{2}$, developing paper, of local views; for any subject of interest. Post cards. Class 1.

RENEWALS

1362—Ira G. Christensen, Monte Vista, Colo.
Wish trial exchange with good stereoscopic workers; have such subjects as Rocky Mountain scenery, etc. Class 1.

1692—E. L. Bickford, First Nat'l Bank, Napa, Cal.

Class 2. While in Class 2, would reply to any proposals to exchange lantern slides of any first-class work of birds or nests and of "boy scout" activities.

1817X—Lettie M. Loomis, Summerland, Cal.
4 $\frac{1}{2}$ x6 $\frac{1}{2}$, developing paper, of landscapes, ocean and mountain views; for anything of interest. Post cards only. Class 1.

1854—Burdette Harrison, 210 Lack St., Tarentum, Pa.

Post cards of things of general interest; for the same. Only good work given and received. Class 1.

2049X—Mrs. Vercia Louck, Box 41, Kalona, Iowa.

4x5, post cards, and 2 $\frac{1}{2}$ x4 $\frac{1}{4}$, developing paper, of landscapes and genre mostly; for the same and anything of general interest. Class 1.

2123—J. B. Oheim, P. O. Drawer M, Henrietta, Texas.

Will exchange for anything interesting, no matter what it is, if it is original work. Class 1.

2171—Martin Graf, Metairie Falls, Wash.

3 $\frac{1}{4}$ x5 $\frac{1}{2}$ up to and including 6 $\frac{1}{4}$ x8 $\frac{1}{2}$, of portraits, landscapes, animals, and farm scenery, also foreign exchange. Only first-class work and glossy paper preferred. Class 1.

2215X—S. S. Webb, 805 E. Market St., Warren, Ohio.

Post cards and lantern slides of any good subject. Only good work accepted or sent. Post cards only. Class 1.

2229—Clare W. Faulkner, Box 647, Dawson, Yukon Ter., Canada. Class 2.

2562X—Z. T. Rawlston, R. F. D. No. 1, Hixson, Tenn.

Post cards of interesting subjects, landscapes, water scenes, wild animals, and mountain scenery. Good work only. Class 1.

2671—Arthur Soderstrum, 416 Commerce Bldg., Topeka, Kan.

Desires Yellowstone Park and foreign views. Class 2.

2778—E. W. Arlin, Rockport, Wash. Class 2.

2787—Dr. Collins Yerxa, 1201 W. 14th St., Williamsport, Pa.

Post cards and 5x7, various papers, of canoe girls, bathing girls, and children; for pretty girls, children, and interesting scenery with people. Class 1.

2795—Harry A. Johnson, Box 515, Simcoe, Ont., Canada.

3 $\frac{1}{4}$ x5 $\frac{1}{2}$, developing paper, of scenes and general views; for the same. Class 1.

2835—Frank M. Remster, 69 Myrtle St., Bridge-ton, N. J. Class 2.

285\ H. M. Sutton, Box 1093, care Sutton, Steele & Steele, Dallas, Texas.

5x7, 3 $\frac{1}{4}$ x5 $\frac{1}{2}$, stereo, 3x3 $\frac{1}{4}$, various papers, of landscapes, and scenes in foreign countries, Mexico and a few in England; for any good stereo print or 3 $\frac{1}{4}$ x5 $\frac{1}{2}$ landscape views. Class 1.

2885—George Macaulay, 167 Allen St., New Bedford, Mass.

3 $\frac{1}{4}$ x4 $\frac{1}{4}$, developing paper or post cards, of marines, and miscellaneous views, also a few speed views; for views of interest, especially mountain views. Good work only. Class 1.

3131—Milford Baker, 1512 Lane St., Topeka, Kan.

3 $\frac{1}{4}$ x4 $\frac{1}{4}$ and 4x5. Has been traveling and is now ready to exchange again with some new views of Yellowstone Park. If all members to whom she owes prints will write her, she will gladly send the prints due. Class 1.

3151—Walter L. Shaffer, R. F. D. No. 1, Tekonsha, Mich. Class 2.

3230—Lewis D. Capen, Box 24, Millbrook, Mich. Class 3.

3315—Miss Edna E. Williams, Fair Haven, N. Y.

4x5, 3 $\frac{1}{4}$ x5 $\frac{1}{2}$, various papers, of marine, landscapes, and general views; for the same. Post cards only. Class 1.

3375—Harvey G. Grofe, Boyertown, Pa. Class 2.

CHANGES OF ADDRESS

631X—C. H. Jongejan, 753 Grandville Ave., Grand Rapids, Mich.

(Was 331 Grandville Ave.)

3025—Felix Cremer, Apartado 1939, Mexico City, Mexico.

(Was Pachuca, Hidalgo, Mexico.)

3096X—David Gibb, Box 166, Zanesville, Ohio.

(Was Saginaw, Mich.)

3128—Dr. L. D. Pfouts, Payson, Utah.

(Was Eureka, Utah.)

3322—K. G. Nelson, 325 So. 6th St., La Crosse, Wis.

(Was Viroqua, Wis.)

3342—Warren W. Willison, 714 Main St., Day-enport, Iowa.

(Was 331 E. 13th St.)

3493—James F. Kudrie, Valley Junction, Iowa.

(Was Sibley.)



OUR BOOK SHELVES

"False Modesty"

In this, his latest book, Doctor E. B. Lowry, the well-known author of "Confidences," "Truths," and other works, makes an appeal to all parents and teachers for the proper education of the young in the matter of sexual hygiene, and makes the appeal in a convincing and thorough manner. As in his other books, he renders a service that is invaluable to perplexed parents and those having the education of children in their hands by pointing out the folly of allowing

children to grow up in ignorance of the many things that are vital to their welfare, of allowing them to obtain false ideas that can have but a detrimental effect upon their entire lives. Folly is really a weak word to describe the too common lack of attention to the matters which the good Doctor shows us so plainly are of such vital importance. The book is neatly bound in cloth, 16 mo., price fifty cents; by mail, fifty-five cents. Published by Forbes & Company, 443 South Dearborn Street, Chicago, Illinois.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported by William Wolff

Rudolph M. von Rubens has taken over the Borges Studio in the Mission.

R. W. Horne is again in business in Salinas, having taken back his old studio there.

J. Mandl, of Mandl & Gates, this city, passed away January second.

J. P. Donovan, one of the well-known old timers, passed away on January tenth.

Myrt Kowalsky has left Bakersfield and is now located in Oakland.

Mr. Freeman, of the Freeman Art Company, Eureka, passed through the city the latter part of January, returning from Colorado, where he has been looking after his father's estate during the past month.

The writer has just returned from his annual trip to the Hawaiian Islands. While there he renewed old acquaintances with a large number of former San Franciscans, including Edgeworth, Warren, Chilson, Bangs and others. All are doing well and like the Islands while yet retaining a warm spot in their hearts for old San Francisco.

Roscoe Perkins of Honolulu has a well-appointed place and is putting in more improvements all the time.

"Bonine" is the man who makes all the moving pictures of the Island of Hawaii. He showed the writer some very fine films that he had recently turned out.

Mayo Studio Completed

The rooms formerly occupied by the A. T. Wood Realty Company have been remodeled and converted into a modern photograph studio. The work completed, Mr. Mayo now has one of the best equipped photo studios in the State. For the last eight or more years he has been engaged in this profession in Modesto, and built up a splendid trade for himself. About two months ago Mr. Mayo sold his business and in looking around for a new location, decided to come to Oakdale. This is practically an open field for an up-to-date studio, there having been only a car here during the last two years. A high-

class professional artist like Mr. Mayo will build up a splendid patronage in this field. With the development of the Oakdale Irrigation District all business in Oakdale, as its natural business center, will grow in proportion. Mr. Mayo will not only conduct a first-class studio, but will also handle cameras, kodaks, and all photographic supplies. Custom development of plates, films and pictures will be given professional attention.—*Oakdale (California) Graphic.*

Suit Over Picture

Richard E. McMann, of the Northwest Photo Supply Company, 1320 Second Avenue, whose deposition was taken in the suit of Miss Violet Evans against the Hammer Dry Plate Company for the unauthorized use of her photograph, said yesterday that the photograph had not been offered for sale in Seattle.

"Mrs. John T. Killoren, sister of Miss Violet Evans, who has brought suit in the courts at St. Louis, recognized the photograph, which was hanging on the wall in our store," said Mr. McMann. "She said that her sister, whose home is in St. Louis, was the original of the photograph and that she would like to have it.

"A short time afterward Miss Evans began suit against the Hammer Dry Plate Company for \$35,000 damages. That firm wired me to return to them the picture at once, which I did.

"The photograph hung on the walls of our store for three years. During that time no other photograph in the least objectionable was displayed, and Mrs. Killoren told me that there appeared to be nothing objectionable in showing the picture in that manner. It was never displayed in the window, but on the wall of the store, or, more properly speaking, on the wall of my office, which is separated from the store by a railing. The negative was made by a St. Louis photographer. The contention of the Hammer Dry Plate Company is that per-

NOTES AND COMMENT

mission was obtained to use the picture.—*Seattle Post-Intelligencer*.

Mountain Gale Braved

Buffeted by a fierce blizzard and standing almost waist deep in snow, three members of the Trinidad Camera Club, O. E. Aultman, John A. Gysin and W. L. Crouch, this week accomplished a unique photographic achievement, taking pictures at an elevation of more than eight thousand feet above sea level in the North Fork country, thirty-eight miles west of Trinidad. Traveling more than ten miles over the highest mountains in Las Animas County, with provisions strapped to their backs and carrying heavy cameras and paraphernalia, the three men wrestled with the gale that swirled the blinding snow in their faces, to snap some real winter scenes.

The result of the trip was the most remarkable collection of snow pictures ever taken in this part of the State. The scenes photographed were mostly above timber line along the North Fork, which is the source of Trinidad's water supply. Toward evening the landscape was so obscured by haze that objects were scarcely discernible. The strength of the men were taxed at times to hold the cameras in place.

The country in which the pictures were taken is one of the most beautiful sections in the Western States in the summer. It is in the close neighborhood of the picturesque Stonewall summer resort which annually claims the attention of hundreds of Eastern tourists.—*Denver News*.

Raymer Goes to Dallas

On February first, Prof. Felix Raymer resigned his position at the Illinois College of Photography to go to Dallas, Texas., where he has accepted a position as operator with the Studio de Luxe, Browne & Browne, proprietors. The position is one of considerable importance, being with the largest and most expensively furnished and equipped studio in the South and Southwest; and while we regret to lose Prof. Raymer and his family, we must congratulate him upon his new position.

Prof. Raymer came to Effingham in 1898 to take the chair of Art, Lighting, Posing and Optics in the Illinois College of Photography. He stands high in his profession, and enjoys a splendid reputation as demonstrator, and a lecturer at the many State and National conventions, having demon-

strated his methods in almost every State in the Union. He has served fifteen years in that field, and it is his belief that the college has a brighter future than ever before, and that the people of Effingham and vicinity should be proud of such an institution.—*Effingham Record*.

The Assur Coloring Process

The Schering Works, the Chemische Fabrik auf Actien, the manufacturers of Duratol, Satrapol and other well-known photographic chemicals, have been giving demonstrations in Berlin and other German cities, of what they style the Assur Coloring Process. The material consists of a box of colors and a tube of the medium called Malmittel. A little of this medium is mixed with the desired color and applied to the print with a piece of cloth wrapped about the finger after being first dipped in turpentine. This new process has none of the disadvantages of water color, pastel, oil, or the aniline colors soluble in water. There is no difficulty in tinting large surfaces evenly, and when the outline is exceeded the surplus is easily removed with another cloth dipped in turpentine. The process is reported as being extremely easy and productive of the most pleasing results. This last makes it possible for the worker to experiment in the matter of clouds and the like without having to sacrifice a print should the first effort not seem satisfactory. On the other hand, once the print has been allowed to remain undisturbed for twenty-eight hours, no amount of turpentine or rubbing will influence it. It is a process that all our readers should investigate, and the American agents, Schering & Glatz, 150 Maiden Lane, New York, should be in a position to supply the material long before this reaches our readers. Write them for particulars concerning this new process of coloring photographs in the easy way.

Burton in Vaudeville

William J. Burton, Jr., formerly official photographer for the *St. Louis Times*, the *Chicago Tribune* and *Leslie's Weekly*, arrived in Virginia today, and for the next three days will furnish at the Royal Theater one of the most unique attractions ever seen on the local vaudeville stage, the only one of its kind before the public today. He displays fifty great pictures, illustrating in color, life,

action and art everyday events, and talks entertainingly of the pictures while they are shown on the screen. He will add local pictures to the display where possible. Mr. Burton, who is described as America's greatest newspaper photographer, called at the office of the *Daily Virginian* today and favored us by showing some of his notable work in photography, including the great double page photograph of the Mississippi ice gorge which he made for *Leslie's Weekly*. It is well worth anyone's time to see these pictures at the Royal and hear Mr. Burton's entertaining lecture.—*Daily Virginian*

New List of Publishers

The publisher of "Cash and the Camera" advises us that the new list of three hundred and sixty-one buyers of prints will be off the press before this notice meets the eye of our readers. It will be supplied as a premium with the book "Cash and the Camera," the two making up a special offer for one dollar, the price of the book alone. Send your orders direct to the publisher, A. S. Dudley, Box 775A, Philadelphia, Pennsylvania.

Mr. Bodine's New Activities

H. Oliver Bodine, well known to our readers as a contributor of several helpful articles and no doubt well known to many of them personally, is sending out an announcement to their large dealers advising that the sales department of the Wollensak Company has been merged with the promotion of trade department, both now being under his charge. This is a well merited advancement that Mr. Bodine has earned by the excellent work done by his department of promotion during the few months in which it has been in operation and we are sure that a large number of friends will join with us in wishing him like success with his newly added duties and responsibilities.

Automatic Dependable Flashlamp

This, the latest production of the Victor people, is a most durable, reliable, convenient and economical form of hand flash lamp. It ignites the powder by means of a paper cap, but, unlike others, a simple retainer makes it impossible for the cap to get out of position before firing, once it is properly placed. Furthermore, it is self-setting, yet entirely free from the least danger of premature ignition, exposures are made instantly, with-

out losing any time or trouble in resetting the trigger.

They are made of strong sheet steel, the highest grade of materials procurable and fitted with detachable handles. The No. 1 size, price seventy-five cents, is $1\frac{1}{4} \times 1\frac{3}{8}$ inches and is easily carried in a coat pocket. The No. 2 size is correspondingly larger. The powder is fired instantaneously when the operator pulls down on the ring; and, as there is not sound or motion preceding the flash, the subject has no indication of when the flash will occur. They are made by Jas. H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, and can be secured from all dealers.

Death of James Foster Hathaway

The photographic world has lost a sincere friend in the passing of James Foster Hathaway, president and founder of the Sprague-Hathaway Company, on January thirteenth, at the age of sixty-five, at his home in West Somerville, Massachusetts. His life has furnished a remarkable example of a self-made man who rose from lowly beginnings to the presidency of a large business, a business which he founded and developed by his untiring industry.

It may not be generally known that Mr. Hathaway, becoming interested, some years ago, in the possibilities of photographic conventions, is responsible, in no small degree, for our excellent National organization of today. The first New England convention was largely made possible by the liberality and hard work of Mr. Hathaway and his close friend, the late Benjamin French of Boston. This convention, the result of their untiring energy, was the forerunner of the National convention. Mr. Hathaway always felt that the yearly meeting of the photographers, this getting together and talking over ideas, was conducive to the greatest good for the greatest number. And further, a number of individual photographers, men who now stand high among their fellows, can ascribe at least a portion of their success to the personal interest of this quiet, energetic man who reached down deeply into his own pocket to help them when financial assistance was necessary. He had an unusually large circle of personal and business friends, the inevitable result of square dealing with and kindly interest in every man with whom he came in contact.

NOTES AND COMMENT

Send For It

Amateurs who like to delve into popular science should drop a line to the Bausch & Lomb Optical Company for their little monograph on "Magic Eye." This little booklet tells of the wonders of the microscopic world. They also have on hand several other monographs of interest to the amateur photographer, including "The Making of an An-astigmat," "Speed Photography" and "On Winter Days." Copies of any of these monographs together with the booklet, "Photography Indoors," will be sent to those who are interested. Address postal to Bausch & Lomb Optical Company, 643 St. Paul Street, Rochester, New York.

Business Enterprise

A week ago, on the morning of December seventeenth, Messrs. Harringtons, Limited, suppliers of photographic requisites, who carry on a large business in George Street, almost adjoining the Postoffice, had their premises burnt right out, leaving nothing but the bare walls standing. Within two hours after the arrival of the principals on the scene the business of a drapery firm two doors away was bought, the balance of the lease taken over, and another firm of drapers was allowed to have the entire stock at their own price, providing they removed it that day. The firm in the meantime was sorting out the reserve stock, and placing it in order, and on Tuesday morning the business of Messrs. Harrington, Limited, was in full swing again in the new but temporary premises, with not one line of goods missing. Such business enterprise deserved encouragement, and in this case the public granted it, for judging by the crowd that has filled the shop, the record of a big Christmas trade will not be lost to this energetic firm.

When Are Prints Fixed

The best way to make sure that the fixing bath for paper is always doing its work is to obtain from your dealer a box of stale or otherwise unsalable plates, and cut these into narrow strips. Then, when the last print of a batch goes into the fixing bath, insert one end of one of these strips. When that end clears, reverse the strip and allow the other end to clear. When this is achieved one may be quite sure that the prints are well fixed if they have not been allowed to matt together. In fact, should only one print occupy the fixing tray, the clearing of one

end of the plate strip would assure thorough fixing of the print at the same time.

Notes from the Illinois College of Photography

Messrs. B. W. Post, J. O. Humphrey and A. J. Lomen, after spending a short time investigating, have enrolled for a full course of photography.

T. J. Hertel has secured a studio at Clintonville, Wisconsin, and the Misses McLaughlin will engage in the photographic business at Pittsfield, Illinois.

Prof. C. C. McCorkill, who was instructor in the finishing department about two years ago, has again taken a position on the faculty.

Frank Catencamp, who took a course in photography the past summer and fall, is building an up-to-date studio at Marion, Wisconsin.

Harold Morton, of 1911, made the college a visit last month en route to Decatur, Illinois, where he will take a position as photo-engraver on one of the daily newspapers.

Prof. C. W. Fisher, of the Bissell College of Photo Engraving, has returned from a week's trip to Georgia and Florida, where he has been visiting relatives and inspecting his orange ranches.

Miss Alice Miller, who has been employed in a studio at Louisville, Illinois, the past winter, has returned to the College to finish her course in photography.

Flashlight Without Smoke

Home portrait groups, banquets, weddings and the like are all the best kind of subjects for the photographer. They are both desirable and profitable as subjects for the camera. If the photographer could be sure of sufficient light and at the same time avoid the smoke nuisance, the production of successful pictures would be a very easy matter. Making it an easy matter is very simple with the Victor Portable Flash lamp, a simple piece of apparatus in which the flash is made inside an inverted, translucent bag of ample dimensions. A description of the many advantages and convenient features which are embodied in this piece of apparatus would require more space than we have at our disposal. We have used it ourselves with the greatest satisfaction and would advise every photographer to get a descriptive circular and familiarize

CAMERA CRAFT

himself with its capabilities. Write the makers, James H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, Illinois, and ask them to send you particulars and cut showing the lamp.

Executive Committee Report

Kansas City, Mo., Jan. 10, 1913.

At the call of the president, Charles F. Townsend, the Board of Officers of the Photographers Association of America met in executive session at Kansas City, on January sixth. Present were: Charles F. Townsend, president; Manly W. Tyree, first vice-president; Will H. Towles, second vice-president; L. A. Dozer, treasurer, and Homer T. Harden, secretary.

President Townsend appointed the following committees: Stationery, Tyree; buttons, Dozer; headquarters, Dozer; decorations, Messrs. Harden and Strauss; auditing, Messrs. Towles and Harden; entertainment, the entire board; press, Messrs. Thompson, Towles and Strauss; hotels, Messrs. Studebaker and Reeder; information bureau, the local committee; transportation, Messrs. Briggs and Moore; association annual, Messrs. Tyree, Towles and Dozer; publicity, the entire board; legislation, Messrs. Holsinger, Holloway, Harris, Larimer and Hays; membership and credentials, Messrs. Lewis, Voiland and Schanz; applied ethics, Messrs. Holsinger, Harris, Free, Brush and Hurst; progress of photography, Messrs. Rau and Gerhard; foreign affairs, Ackerman.

The secretary was instructed to have prepared a letter of resolutions to the Senators and Representatives in Congress of the five States represented on the board, asking them to assist in defeating that portion of the Lodge bill relating to the sale and display of photographs.

Various suggestions and matters pertaining to the conducting of the 1913 National Convention were discussed and the following resolutions were unanimously adopted:

That a six-day convention be held beginning July twenty-first; that Kansas City's offer of the use of Convention Hall be accepted; that a practical studio in operation under the best talent obtainable be arranged on the floor of Convention Hall and under the charge of the president, assisted by the secretary.

That the Kansas City entertainment committee's offer of automobile rides at 8 a. m. and 4:30 p. m. during the week, for tours of parks and boulevards, and Wednesday evening of convention week at Electric Park as their guests, be accepted with thanks; that not more than five pictures be solicited from each exhibitor to be passed upon by a jury; that the association publish a record of the convention; that not more than twenty pictures be selected from the exhibits for reproduction in the record, but that no picture be selected except those made by members in good standing.

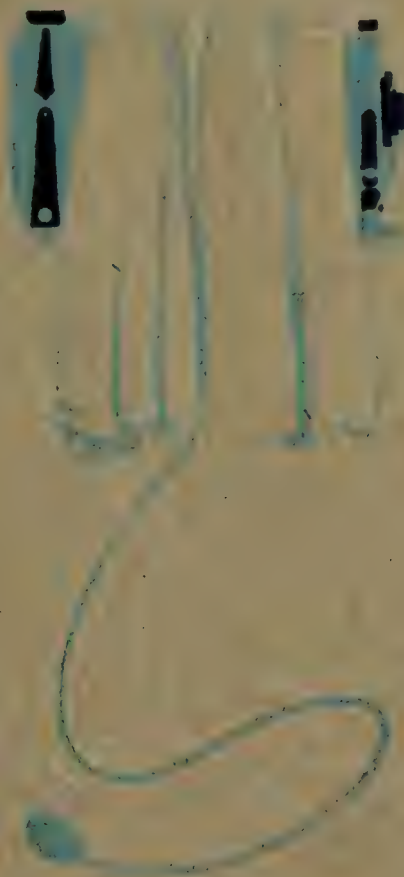
A general advertising campaign was arranged. A contract with a local decorating company for construction of all booths of a uniform design was signed, and a very interesting program was outlined.

Convention Hall is a larger and more conveniently arranged building than the association has had for many years. The booths will be 10x12 feet instead of 8x8, as at Philadelphia last year. There is plenty of room for wide aisles and even the desk space will not be crowded. The board was given an elaborate banquet on January tenth by the Kansas City photographers, about sixty being present.

The summary of the treasurer's account for 1912 is as follows:

Cash on hand, January 1st, 1912	\$7,629.16
Received from:	
Membership and dues	\$3,729.00
Sale of ladies' pins	16.50
Per capita tax of affiliated societies	234.75
Advertising, 1912 Annual	1,510.00
Sale of floor space in Convention Hall	4,428.78
Interest Second National Bank	176.26
Tickets to Atlantic City	36.00
Sale of Annuals, gum printing books, glass, etc.	17.46 10,148.75
<hr/>	
	\$17,777.91
Paid out on vouchers, 1,134-1,248, inclusive	12,316.16
Cash on hand, January 1st, 1913	5,461.75 \$17,777.91
<hr/>	

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

The Reason in a Nutshell

By Sidney Allan

The photographic art critic of the *Photographers' Association of America* thus explains the superiority of

Cyko Prints

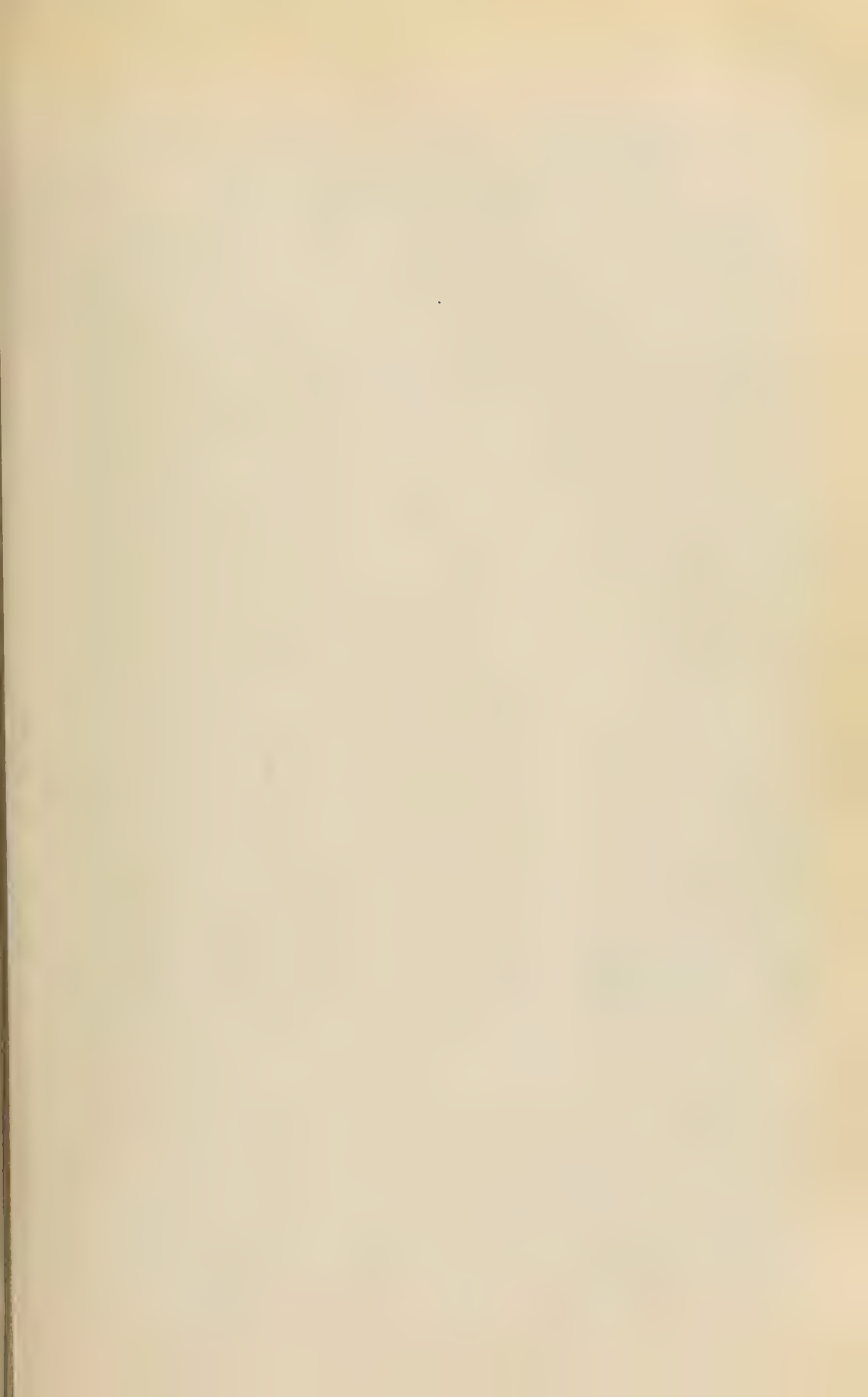
"The light and shadows blend so harmoniously through such soft, progressive gradation of tones that there is no strong dividing line.

"The shadows in CYKO prints never look opaque, but always retain some atmospheric quality."

Can you afford to use any other paper?

AnSCO Company

Binghamton, N. Y.







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A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

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APRIL, 1913

No. 4

Artistic Gray Effects

By H. T. Biclowski



With Illustrations by the Author

A gray-toned bromide enlargement, properly made from a suitable negative, and of a subject that demands no strong contrasts, gives a pictorial effect that it is hard to equal by any other photographic method. In no other way can the photographer secure pictures so delicate and pure in their real beauty as are these low-toned, silver-gray prints. While it is possible that their very delicacy stands in the way of their becoming more popular, I believe that a description of the method employed in producing them will do much to remove the real cause of their rarity. Some workers have perhaps made them, but, through selecting subjects with which the treatment was not at all in keeping, found only disappointment in the results. Others failed to secure the effect desired through using negatives too dense or contrasty. Still others may have had a keen appreciation of the beauties of these effects, but, through lacking knowledge of their method of production, failed to secure what they had hoped for, became discouraged and went back to the plan of making all prints sepia.

Before proceeding further, it might be well to say a few words on behalf of this low-tone treatment for the benefit of those workers who are not yet out of the snap and brilliancy worshipping class. As they progress, they will learn what the real painter learns very early, namely, that fidelity of detail, emphasized by all the permissible contrast, does not constitute a picture except in those few cases in which such treatment best interprets the mental impress that the subject conveys to the mind. It is this capability of conveying a mental impression, of creating a thought, of telling a story, that makes one scene or subject



AN ENLARGEMENT MADE IN THE REGULAR WAY

pictorial while another is not. And the technique of photography should harmonize with the thought to be expressed just as the writer's "style" is made to harmonize with his theme.

Portraits of children and girls in white dresses and amid not too somber surroundings, are properly rendered in these gray tones; such treatment preserving that simplicity and daintiness so harmonious and appropriate. Pictures of sand dunes look well in these low tones, and stretches of sandy beach with the white breakers rolling up on them are specially fine when so rendered. Meadow scenes containing no heavy foliage, and rolling hills that are well



AN ENLARGEMENT MADE AS DESCRIBED

ARTISTIC GRAY EFFECTS



"SAND DUNES LOOK WELL IN THESE LOW TONES"

lighted, are all better done in this way, particularly if the effect does not clash with the "feeling" of the scene.

Sentiment in favor of softer tones, the use of softer working lenses, and the introduction of less contrast into both negatives and prints, is slowly but surely increasing. This looks encouraging, although the millennium in photo-



"THE EFFECT DOES NOT CLASH WITH THE FEELING OF THE SCENE"

CAMERA CRAFT

graphic art will not come through the blind acceptance of any one style or treatment. Technique must be varied in order to harmonize with different subjects and with the endless themes the artist may wish to portray.

Harsh negatives, those with excessive contrast, are impossible for this treatment, as was proven during my recent demonstration at the Camera Club rooms. The members had been invited to hand in negatives for use during the evening and in nearly every case the ones submitted were so contrasty that it was difficult or impossible to secure from them the desired clear gray tones. With one or two exceptions, the negatives from which these illustrations are made were all developed in a tank, with rodinal, one part of rodinal to from one hundred to one hundred and fifty parts of water, allowing from an hour to an hour and a half for development. For the others was used edinol-hydro made up with about equal amounts of the sodas. These last, being fully exposed, were given short development.

The bromide paper used should be slightly rough, dead matt. The exposure given the print must be as short as possible, yet still allowing of a developable image. At the first appearance of the image, as the print lies in the developer, it should be removed and placed in a tray of clear water, where it is allowed to remain for a minute or two until no more detail can be brought out, finally being placed in a stronger developer to gain the proper strength and color. For developing the prints, I have found that the most satisfactory as well as the simplest and easiest handled developer is rodinal. It should be used well diluted, very weak, one part rodinal to eighty parts water, to start the print, and stronger than normal, or about one to forty, to finish with. Edinol-hydro also gives a very good tone when properly handled, and I

have found metol-hydro quite satisfactory and capable of producing fair effects, though hardly equalizing rodinal in my hands. The results secured from dif-



"YOU CAN'T MAKE PICTURES A LITTLE BIT"

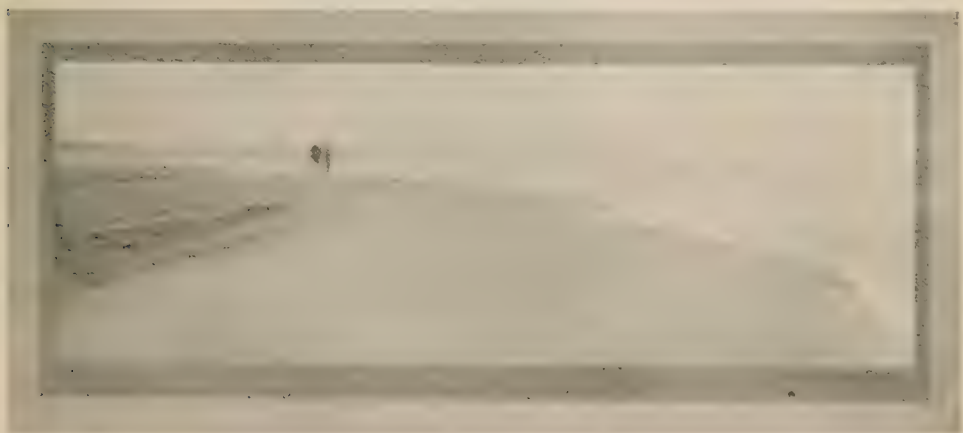
ARTISTIC GRAY EFFECTS



ONE OF THE WINGED DENIZENS OF THE BAY

ferent developers depend somewhat upon the individuality of the worker, the personal equation seeming to have much influence. One should use the material that produces, for him, the most pleasing effects.

The important factor is the water treatment to which the print is subjected when the image first appears. Yet care is required at each step. An over-exposed print will be muddy in appearance and a print from a very harsh or contrasty negative will have unsatisfactory shadows. The stronger the image when the print goes into the water, the darker and more contrasty it will be when finished. And it is in allowing this prolonged water treatment that rodinal and edinol excel, because they are so free from any tendency to stain.



"STRETCHES OF SANDY BEACH ARE SPECIALLY FINE"

It is only in exceptional cases that a stained print results from their use, even with the quite prolonged treatment. I have left prints in water for as long as five minutes without harm, but of course kept them covered.



Moving Pictures for the Amateur

By Homer King



With Illustrations furnished by Sig. Gianni Bettini

The amateur, the one making up that vast army of his kind over which the charm of the Kodak has spread, that army that has proclaimed so widely the popularity of photography, has resented the restrictions heretofore imposed that prevented his sharing in the delights of producing and showing his own conceptions of the application of the moving-picture camera. He has longed to match his own skill and power of selection against that of the favored few in the matter of picturing the moving scenes about him with the added charm of actual motion made possible in their display. He wants to portray the local or home incidents and show them as full of life and motion upon a screen in his own drawing room for his own friends.



SIG. BETTINI AND HIS CAMERA

Three things have combined to prevent this popularity that this body of workers stood ready to bestow. These are the high price of the apparatus, the expensive nature of the films required and the heavy and rather clumsy

MOVING PICTURES FOR THE AMATEUR

machinery necessary; all of these hindrances being much the same as those in the path of the photographic amateur in the early day of ordinary photography. But, just as these early-day obstacles were overcome by the kodak and the simplified process that followed, the difficulties attending the production of



TWELVE OF THE THIRTY-SIX ROWS ACROSS THE PLATE, EXACT SIZE

moving pictures bid fair to be surmounted by the work of an Italian inventor, Sig. Gianni Bettini, well known in Paris through his ingenious perfection of the talking machine, whose system is based upon an entirely new principle. True, other inventors have attempted to replace the celluloid film with ordinary glass plates, but their efforts have not resulted in the necessary stability of the projected image. This disagreeable vibration of the image heretofore so painfully evident in the employment of glass plates has been due to the weight of the plates not being suitably controlled during the rapid displacement before a fixed point, such displacement involving as it does sudden stops at each exposure, resulting in longitudinal and transversal vibrations of both the plates and the apparatus. In the Bettini system, instead of the plate moving, the optical system, the object glass, is displayed, this latter being accomplished without causing any displacement of the image as one might at first suppose.

In attacking the problem, and doing so with a full realization of the shortcomings of these former efforts, yet convinced that a cheaper medium than the usual strip of film had to be employed, Sig. Bettini set about securing the greatest possible number of small pictures on a plate measuring 131x216 millimeters (about 5x8 inches), a standard plate in his country. He succeeded in assembling five hundred and seventy-six views of a suitable size for projection upon this plate, the views arranged in thirty-six lines of sixteen each. At the usual rate, this number permits each plate to record action covering a complete scene of about one minute's duration.

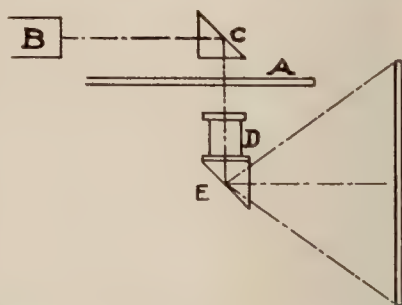
CAMERA CRAFT

In describing the system I can hardly do better than give the reader a rather free translation of a description which appeared in *La Fotografia Artistica* last winter. It reads: "The plate is supported on one side of a metal frame on a toothed rack which forms a part of it and makes it possible for it to be rapidly and automatically joined to the next plate, which follows in such a way that there is no interruption between the two, which permits the recording of scenes of comparatively long duration. The means by which the clearness of images is obtained, a quite new optical principal, is based on the use of a condenser B, as shown in the sketch herewith, which furnishes a pencil of luminous rays, the axis of which is parallel to the plane of the plate A, carrying the views, instead of acting perpendicularly upon them as in ordinary exposure. A prism condenser C, deviates the light and distributes it across the plate. An objective D, in combination with another total reflecting prism E, placed on the other side of the plate, receives the light rays and the image is projected on the screen, F, placed perpendicularly to the plane of the plate A, on which is formed the enlarged image. The plate remains unmoved and it is the objective, and the prism D and E, of a very light weight like the reflection prism, C, which is displaced by an irregular, simultaneous motion in and out parallel to the plate, A. The focus does not change, and the entire series of small photographic positives comprising one row are successively lighted and projected on the screen, F. It is only necessary then to lower the plate the height of one image at the end of each line in order that the following range can obtain the light.

"One objection is brought to mind at the very outset in examining the principle of the apparatus: One asks how an objective which is displaced in the direction of its own optic axis can show images on the screen which superpose each other; yet those which are projected when the objective is towards the back of the apparatus are no larger than those which are projected when it is in front; that is to say, nearer to the screen. But we must bear in mind the fact that the negative has been obtained with the same system, and that, consequently, it has received from the object an image smaller with the objective towards the rear and larger when towards the front. The result is, at the time of the projection, an exact compensation.

"The inventor has also considered that the amateur would not be content with the views he would be able to secure for himself, but that he would wish to possess the facilities to project the scenarios conceived by the moving-picture men. To this end he has constructed a special apparatus which will permit of the publishing on plates of the films which are generally used in the present form of regular motion-picture projectors.

"The mechanism, extremely simple, is enclosed in an aluminum box of very small dimensions, about two hundred and ten millimeters long, one hundred broad and eighty-five high, the whole being no heavier than the ordinary loaded kodak. The optic system is fixed on a slide guided in a groove or track. Be-



MOVING PICTURES FOR THE AMATEUR

neath the slide is set a screw with double reversed threads, with a passage equal to the size of one image. This screw, worked by a continuous rotating movement, has for its purpose the drawing, in a continuous rectilinear movement back and forth, of a carriage which stretches in one direction or another by means of a spring which is attached to the slide by two lever arms. Moreover, a comb stops and limits the time of each displacement to that of fixed position in the proportion of one to five, which permits of a projection offering the minimum of twinkling. When one lateral

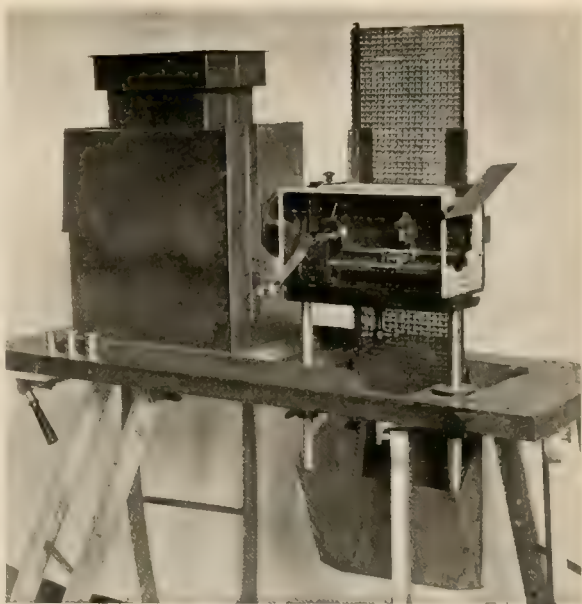
extremity of the plate is affected, it is displaced from top to bottom six millimeters (about one-quarter inch), the height of one photograph, so that the following range is on the level of the optic system.

"In a new model which is now under construction, Sig. Bettini has replaced the arc lamp by a small incandescent lamp fastened to a very small condenser in place of the prism C, and which accompanies the objective in all its displacements. This manner of lighting enormously simplifies the use of the apparatus and renders it very practical for the amateur. In order to make projections, he will only have to connect with the socket of the ordinary incandescent lamps employed generally throughout dwellings.

"The apparatus designed to make the pictures includes only the objective D and the prism E, the prism C being taken off. The apparatus enclosed in its box holds a magazine containing twelve plates which follow each other automatically; thus one person can register six thousand eight hundred and seventy-two images without reloading the machine. Concerning the projection, the number of plates one can use is unlimited, for it is possible to replace used plates with new ones as fast as they pass through the apparatus.

"The above, in the main, describes the Bettini plate cinematograph. Realizing its novelty, its intrinsic qualities, its ease of management, and last, but not least, its extreme cheapness, no one can doubt its great social, technical and financial success."

Obviously, the low cost of the apparatus and the comparatively inexpensive material used are the system's greatest recommendation. The camera costs about one-third that of the regular moving-picture instrument and it answers as a projecting apparatus as well. A single glass plate costing but a few cents



BEING USED AS A PROJECTOR

has a capacity equal to that of thirty-six feet of celluloid film costing about one dollar and a half. The inventor has also adapted the apparatus to the use of the ordinary hand camera film, although the positives have to be printed from this film onto the glass plates used for projection. Still another adaptation of the system is that permitting of the transference from the ordinary moving-picture film to the glass plates, in this latter case the pictures being made smaller so that over a thousand are placed on one plate, a number representing sixty-four feet of film costing about two dollars and fifty cents.

It should be explained that the pictures reproduced herewith do not show the latest development of the apparatus, but they were all that Sig. Bettini had available at the time our request was made. It is not known when the exploitation of this system will take place in this country, but preparations are being made for its introduction. No doubt, however, lovers of things photographic will have, through this invention, an opportunity of broadening their field of photographic activities at a no very distant date.

A great deal of the joy of life consists in doing perfectly, or at least to the best of one's ability, everything which he attempts to do. There is a sense of satisfaction, a pride, in surveying such a work—a work which is rounded, full, exact, complete in all its parts—which the superficial man, who leaves his work in a slovenly, slipshod, unfinished condition, can never know. It is this conscientious completeness which turns work into art. The smallest thing, well done, becomes artistic.—WILLIAM MATTHEWS.



MAKING HAY WHILE THE SUN SHINES

By JAMES VICTOR FEATHER

Birds' Nests and Flowers

By Geo. H. Webb



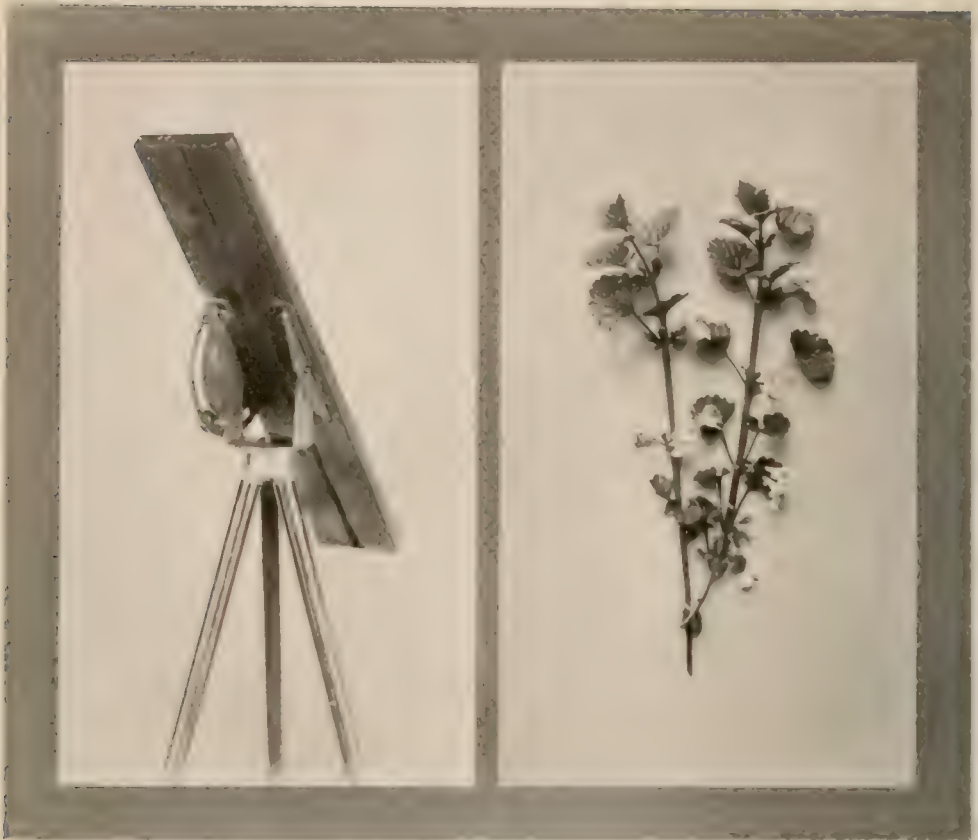
With Illustrations by the Author

Complying with the editor's request for a few notes concerning methods employed in making these pictures of birds and wild flowers which I sent him recently, I would say that I have only had one season's experience at such work and am not very well posted on this fascinating subject. In the first place, I use a 5x7 camera having a sixteen-inch bellows, which last comes in very handy when one wishes to enlarge a small flower or nest. This camera is fitted with a Collinear of nearly eight inches focus, working at f-5.4, fitted with a Koilos shutter.

I made myself a tilting table for my tripod, one that permits me to almost upend my camera. I early found that some such device was absolutely necessary for the work. It consists of a four-inch half-round segment with slot near the outer edge. To this is fastened a 3x12-inch board, which has a slot extending nearly its entire length, allowing the camera to slide up and down to get the desired size of image. I find this table facilitates the work to no small extent.



THE TOWHEE'S NEST



MY TRIED TABLE

GROUND IVY

Photographing birds' nests is not so easy as one might think. The principal difficulty is that when the camera is brought close in order to get a large image, one loses depth. It is hard to choose between the two evils of too small an image or some part out of focus. While one wants to show the eggs and has arranged his camera at an angle of about forty five degrees in order to do so, he still finds some of the foliage is so close that it will not come into focus with the nest farther away. I think the only way to overcome this difficulty is to get farther away, make the nest smaller, and then enlarge to suit. My way of doing this last is to make a large negative from a good print, although others might prefer to make an enlarged positive and from this a negative by contact. This latter method has, in my hands, a bad habit of producing flat results, but by using transparency plates I find that this can be overcome. In making my exposures I do as little trimming away of branches as possible and get through as quickly as I can, because the parent bird will sometimes leave her nest and fail to return. As a lover of birds, I would rather not photograph the nest if I felt the bird would leave. In the case of the Dick Cissel nest, I did quite a little trimming, as the mother bird had left the nest because of the cow bird having used it for one of her eggs. The picture was taken about 7:30 p. m. on a bright day. I used stop U. S. 64, giving about one and a

BIRDS' NESTS AND FLOWERS

half minutes' exposure. The nest was on the east side of a wood and in shadow, making necessary the long exposure.

Nests located on the ground are sometimes deep down, and for these I generally carry a 4x6 mirror, which I use to reflect light into their interior. The Towhee nest was about four feet from the ground and was taken in bright sunlight. Its location made it necessary for me to get up quite high with the camera. One can imagine my temperature when I finished the job on one of those hot days in May. I was not bothered with any foliage, as there were only a few blackberry branches over the nest. These I bent back out of the way, replacing them after the work was done. I exposed two plates, using U. S. 64 stop, giving one two seconds and the other four. The print herewith was from the shorter exposure. The eggs look rough, but they are not; they are mottled with brown and quite hard to photograph correctly. Blue eggs take the best. My trouble, through my inexperience, is to find the nests, and one year does not teach one very much. However, I hope to take up the work again this spring as soon as the birds are here. It is too interesting a subject to drop after only one season. I am never at a loss to find a subject to photograph during the summer months. One need only get out into the open to find the woods and fields are full of subjects if one will but look for them. There are to be found many small flowers that are as beautiful as any of the larger kind, in some cases even more interestingly so. Take the ground ivy as an example. True, it is but a common weed, and yet, examined closely, it proves to be quite pleasing in its individuality. The one shown herewith was taken about life size, showing well its purple flowers that bloom nearly all summer.



DICK SISSEL'S NEST WITH COW BIRD EGG AT LEFT



JACK IN HIS NATIVE HAUNTS

I used a light gray cardboard for a background, fastening the plant thereto by means of pins pushed through from the back. The object was, in this case, to get the picture without shadows. I always move around until I find a position where the least amount of shadow is shown. If one will notice the air-brush effects that this print has, I think he will agree that the treatment is good.



JUST A LITTLE BIT OF THE WILD

BIRDS' NESTS AND FLOWERS

What I like best in photographing flowers or plants in their native haunts is the ease with which one can arrange his subjects to his satisfaction. Jack in the Pulpit belongs to this class which is best photographed in his own home. A still day is needed for this work, as one cannot achieve success by snap-shot methods. I believe I waited for more than an hour for "Jack" to hold still; and, as one can see, his picture is not quite sharp at one place. I might have waited longer, but the exposure had to be made, the mosquitoes being so bad that they drove me out. Who has not wandered in a deep wood and found delight in an Indian Pipe, just a bit of fungus along the side of an old, rotten log; or, perhaps a Squirrel-Tail just as it comes through the ground? This



THE NEST OF THE CAT BIRD

fern is best photographed before it uncurls too much. Truly there are a thousand things in the plant world that are worthy of a place in one's photographic album.

I realize that I have not given the reader much practical information, but it is because I do not, as yet, know very much about the subject. But perhaps, after another season, I will be better posted and can then offer suggestions that may be more instructive.

It is the treating of the commonplace with the feeling of the sublime that gives to art its true power.—MILLET.

A man's heart must be in his skill and a man's soul in his craftsmanship.—
MABIE.

Photographic Art Principles

By A. T. DeRome



Mr. DeRome's article in our last issue dealt with "Subject Matter to be Photographed." In the article following he takes up "Harmony of Place and Subject to Thought," the second element in the chart shown last month. The third article will treat of "Elimination of Non-Essentials," "Accent" and "Shape." In fact, the subjects treated in this and following articles from his pen will be related to the first as are the branches, fruit and flowers of a tree related to the trunk. However, this relationship, so clearly shown in the diagram last month, will in no way decrease or destroy the value of any one of the series as an individual and complete discussion of the particular subject treated. The reader has our assurance that a "continued story" is not being foisted upon him. We would also call attention to Mr. DeRome's kind offer to share the application, or lack thereof, of any of the points discussed, in a print sent to him by any of our readers, doing this as fully and promptly as his time will permit. This opportunity should be grasped by any and all of our readers who may feel that they do not thoroughly understand any point which is presented. Prints sent should be unmounted and untrimmed and such as the reader is prepared to have marked upon or otherwise defaced. They should be addressed to A. T. DeRome, care "Camera Craft," Call Building, San Francisco, California.

The young artist, early realizing the necessity of going to nature for his inspiration, in his youthful ardor thinks that he has but to effect a few vigorous strokes in order to penetrate to the innermost sanctuary of artistic success. The experienced artist, after a long investigation, finds himself still in the outer court. It is therefore more fitting that we make haste slowly, thoroughly understanding as we go.



AS ORDINARILY TAKEN, LACKING CLOUDS AND ATMOSPHERE

PHOTOGRAPHIC ART PRINCIPLES



THE SAME SUBJECT SHOWING THE PICTORIAL VALUE OF CLOUDS AND ATMOSPHERE

The most necessary faculty that the artist photographer must possess is initiative, the power to do for himself, to think for himself; and, most important of all, the will to turn a thought impulse into one of action. Unless one acts upon a thought, it remains only a theory, but immediately the thought is acted upon, it becomes a reality, an experience. It is this that gives application to that old truism, "Experience is the best teacher."

Do not infer from the foregoing that the learner will not have to observe certain fundamental principles. The precepts presented, one will find, are but the methods of procedure found to hold good through the average experiences of others who have gone before, others striving to produce the picture that would, with the fewest possible parts, tell the most beautiful story, causing it to be loved and remembered through its harmony with and power to arouse our most pleasant memories.

In contemplating nature, we find innumerable subjects with story-telling, attention-compelling qualities, the analyzation of which is our first duty. Whether it be landscape, sea, or figure, the same few principles will be found to apply; and, in proportion as one applies them, his ultimate success will be measured.

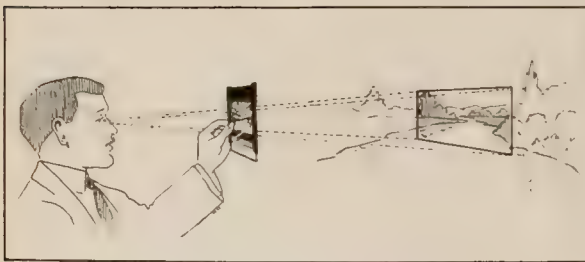
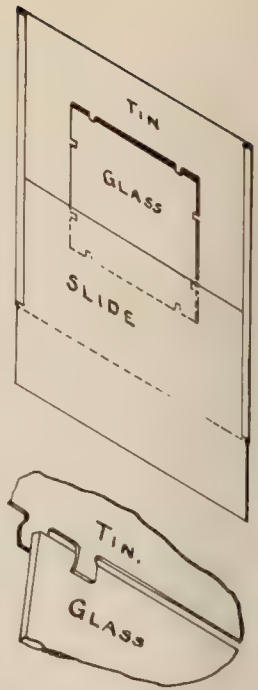
The thousands of iron-bound rules, regulations, and "don'ts" laid down by the average writer will be found but elaborations of a few basic principles, much as our civil laws, ordinances, statutes, etc., are but an elaboration of the Ten Commandments. For that reason, instead of spending our time mastering this mass of individual rules and regulations, let us observe the few fundamental principles, and evolve therefrom, as our individual problems demand, such methods of procedure as will best serve the problem in hand.

CAMERA CRAFT

As I said before, the first thing necessary is to see one's subject in its true light and give it careful analysis. This is not difficult. By making and using a finder, such a one is suggested by the accompanying sketches, one will unconsciously solve, at one stroke, nearly all his problems of balance, composition, etc. This contrivance is by no means new, having been used, in one form or another, since the earliest times by artists of every country.

My reason for so strongly urging the use of this finder to the photographer trying for pictorial effects is that it rids him of those twin deceivers, the modern finder and the ground glass. The finder, through its intensification of color, makes it impossible to judge intelligently of values in black and white as they will be reproduced in the finished print. As to the latter, there has yet to be born the genius who can compose his picture upside down, as one has to do on a ground glass, as well as he could were it right side up.

When going afield with a hand camera, one used without a tripod, one should pick out the view wanted, size up its possibilities through the different shaped openings made available by the slide in the finder, and then, after determining the position at which the camera must be placed to secure the same amount of subject, and the lens aperture to give the proper depth of focus, consult the camera's finder simply to make sure the desired features of the scene come within the boundaries of the plate or film. When using a tripod camera with a focusing screen, one should use the ground glass only for focusing and to make sure as to what comes within the boundaries of the plate. One should not try to use the ground glass as a surface on which to plan the picture or to arrange the composition. It will be found far easier and productive of better results to, in this way, make the subject fit the camera, than to attempt making the camera fit the subject. One will find, of course, that the selected part, the real picture, does not conform to the fixed proportions of his plate. This need cause no anxiety for the reason that, in printing, it is



quite easy to mat out all except those features originally decided upon as desirable when studying the composition through the finder. This selected portion can be enlarged to the most effective size, retaining the originally selected proportions. Working in this way, if one has not done so before, a mine of beauties undreamed of will be opened.

For the average outdoor exposure, matters can be greatly simplified by the

PHOTOGRAPHIC ART PRINCIPLES

use of only one shutter speed in hand camera work. Personally, I have found about one-tenth of a second to suit my every need, and this leaves me only the aperture to worry about. For example, in bright sunlight one can, by working at one-tenth second with U. S. 32, get detail in the shadows without over-exposing the highlights. If it be cloudy, keep to one-tenth second, but open the aperture to as much larger as necessary. The advantage of this plan is that one will always get a negative with good detail and one with a wider range of possible effects for enlarging. Another matter of no small moment, as one will find when using the finder as suggested, is the great saving of material, due to the seeing of the subject more nearly as it will be in the finished print, which causes one to think twice before snapping the shutter. Doing this last, one will, in a greater number of cases, pass the subject by through finding that it does not satisfy as was at first thought. I do not wish to be understood as saying that enlarging will necessarily make a good picture of a poorly selected subject, but it will frequently recover beauties lost in the hardness and diminutive size of the contact print. To summarize the foregoing: All the planning and selecting should be done with a finder such as I have suggested. The lens and camera should be used only as a means of getting the image on the film or plate. Spend the time you have saved here, enlarging.

As these articles are not written for artists, but with the hope of helping the amateur to a better understanding of art terms and principles, I trust I may be pardoned for introducing a few definitions at this point. In defining harmony, John Ruskin says: "The man who has eye and intellect will invent beautiful proportions and arrangements and cannot help it, but he cannot tell us how to do it." Webster says that harmony is the "agreement or concord between the parts of a whole." To me, harmony means the relationship existing between objects of a like character; or, to put it more homely, the relationship between that which our imagination calls up from seeing or thinking of something, and the thing itself. In the making of pictures, the problem is to select the parts that they seem to fit together naturally, each losing its own identity in helping to form a complete whole, each doing its share towards expressing the single thought too great for any one part to express alone.

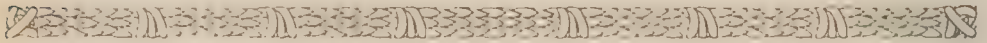
For example, sunlight calls to mind visions of life and action; shadows, of gloom and quiet; mountains call for atmosphere and clouds; water, reflections; a delicate, poetic face suggests the use of some instrument employed in the arts; bushy brows, heavy features and a stolid look seem to require a pipe to complete the thought. How beautiful do all graceful trees, with perhaps a pool in the foreground, become just as the shades of evening come creeping on and the moon rises glimmering through their branches. Yet how uninteresting are these same trees in the heat of mid-day. The stolid oak becomes a weakling in the environment so fitting to the tall, graceful trees, but with the sun playing through his branches and the cool shadows falling across winding paths or over fallen companions beneath, his strength and beauty become a hundred fold more thought inspiring. Craggy mountains against the cloudless sky are far from picturesque, but let their tops be capped and sides draped in mist, and one exclaims, Beautiful! The historical becomes the picturesque; unconsciously one feels they need these mists to express, to convey the thought of grandeur.

Never, I beg of you, commit the too common crime of sticking in something to fill up a space, except when so doing will assist to a clearer telling of the story. One may think to improve the picture, but he deceives only himself. Too often we hear people say, when displaying a picture into which they have forced something irrelevant in their effort to add to its artistic effect, that they did it because "others were doing it that way now." This, to my mind, only displays a perversion of good taste, a lack of initiative, or both. Correct styles are well enough as models only until one has properly developed his own individuality, and it is this development that marks the difference between the follower and the leader.

One will find that the observance of this principle, a strict attention to the fitness of things, will be an invaluable asset. Cultivate an appreciation of this fitness, and then, when there is the slightest feeling that some feature in the subject is out of place, get rid of it if possible. If not, pass that subject by; the discordant feature will be all the more pronounced when the subject is reproduced in the form of the finished print.

I trust the foregoing will make clear just what is meant by the "harmony" I refer to when I say there must be complete harmony between the subject, place and thought; a harmony without which no picture has ever lived except in its maker's own estimation.

Though we are working deeper into the various ramifications of principles, we must gain an understanding as we proceed, in the hope of ultimately bettering our pictures. The one principle that must be kept most strongly in mind is this: Unless the print tells a story, expresses a definite thought, beauty of arrangement and technique do not avail; result can only be classed as a sketch or study, not a picture.



A Simple Acetylene Generator

By Chas. I. Reid



There are, no doubt, many amateurs who would like to construct an enlarging lantern for use at night, but having no supply of electric current or city gas, and knowing that oil lamps are useless, give up the idea as hopeless. However, acetylene light is very actinic, as can be proved by lighting an acetylene burner in daylight. The flame appears perfectly white, not orange, as does an oil lamp. Good acetylene generators can be bought for about ten dollars, but for the amateur who does not care to invest such a large amount the following described home-made apparatus is just as satisfactory, and the cost is very small.

A generator large enough for operating two one-foot (forty-eight candle-power) burners can be made from an ordinary one-quart Mason fruit jar. If one desires to use more burners, he should use a two-quart jar. Having secured the jar, procure about two feet of copper tubing having an inside diameter of

A SIMPLE ACETYLENE GENERATOR



one-eighth inch. This tubing can be obtained from any garage or automobile supply dealer. Also procure a supply of rubber gas tubing; or, if gas tubing is not to be obtained, ordinary nursery tubing will answer the purpose.

Knock the porcelain lining out of the jar cap, and drill or punch two holes through the zinc, holes just large enough to allow the copper tubing to pass through. One hole should be in the middle of the cap and the other towards the side. Cut a piece of the copper tubing long enough to reach about half way to the bottom of the jar. Solder this tube into the hole in the middle of the cap, allowing about an inch to extend above the cap. Cut another piece about two inches in length and solder into the hole in the side of the cap. Both tubes should be well soldered so that the joint is perfectly air-tight.

Attach a tin trough to the bottom of the long tube to cause the water to drip in two places, as this gives a more steady light. Attach some kind of valve to the upper end of the same tube to control the water, one with a needle point being best. The water is supplied from a tank made from an ordinary tin fruit can. Punch a hole in the side of the can near the bottom, and solder a piece of the copper tubing into it, making connections between the can and the generator by means of a piece of rubber tubing. The can should be elevated above the generator by standing on a shelf or box.

This completes the generator, making it ready for use. Simply pour a little water into the tin can, put a little carbide into the jar and screw the cover on air-tight, then connect the burners by means of a piece of rubber tubing. Turn in a little water; and, after a short wait, light the burners. If the light is scattered do not let the water drip quite so fast, but if the flame is not full size let the water drip a little faster.

I would advise the use of the following safety device, as it prevents any

possibility of an explosion. Take a small, wide-mouthed bottle with a good cork and bore two holes in the latter with a piece of sharpened copper tubing. Cut one piece of the copper tubing about three inches and another about one inch in length. Pass these tubes through the holes in the cork, letting about half an inch remain extended above. Fill the bottle about one-third full of water and insert the cork, letting the long tube extend into the water. Connect, with a piece of rubber tubing, the short tube of the generator with the long tube of the safety bottle. Connect, with another piece of rubber tubing, the short tube of the safety bottle and the burner. The gas will rise in bubbles through the water, and should the flame follow the tube to the safety bottle, it will stop there, as it cannot pass through the water. If one desires to use more than the single burner with this safety bottle, he should make an additional hole in the cork for each additional burner; and, passing short pieces of tubing through, connect all the burners with rubber tubing.

The luminosity of acetylene light can be greatly increased by the addition of hydrogen peroxide to the water used in the generator. One and a half ounces of "twenty volume" peroxide in ten ounces of water increases the light about seventy per cent visually, and about fifty per cent photographically.



STEREOSCOPIC DEPARTMENT

Why Is Stereoscopy Not More Popular?

By G. F. Boquet, I. P. A. 3461



With Illustrations by the Author

The answer to this question, as far as I am personally concerned, has been one long known and oft pondered over. Suggestion in part, but mostly observation, served their purpose in solving it.

The editor of this magazine has kindly extended me the use of part of his valuable space to tell the less fortunate delvers in this, the most fascinating of all branches of photography, the story of my chance solution. I shall feel more than amply repaid if my experiences prove of assistance, if only as warning, to other lovers of the art.

My first start in photography was on a very modest scale. My kit consisted of a small snap-shot film camera, together with a rather limited developing and printing outfit. Mine was, I take it, the usual experience that befalls all beginners; at best indifferent, but oftenest bad, when not very bad. Fate

WHY IS STEREOSCOPY NOT MORE POPULAR?

decreed, however, that my entire energies and interest were to suddenly take a new trend. The chance loan by an old amateur friend of mine of a stereo camera was the means for bringing about the change. Since that fateful day I have found in this particular branch of the art an endless source of pleasure and a world of fascination.

The camera loaned me was a 5x7 one, arranged especially for stereo work. With carrying case, tripod and six double plate holders, it proved a rather bulky and quite heavy package. But my enthusiasm seemed instinctively to have grown very great, and I suspect that what most preoccupied me at the time was not the heft of the outfit, but the probable loss of many pictures which I felt must escape me for want of more plate holders. Who that has learned to love our art can truly say that similar qualms have not assailed him on his early ventures afield?

My first stereoscopic exposures, when developed, resulted beautifully; at least, they seemed so to the boyish eyes that superintended the work. I remember, however, that when it came to the mounting of the prints I encountered many difficulties. Had it not been for the very clear instructions given me by my old friend, these might have proved insurmountable. I remember that I finally overcame all and completed the work to my own thorough satisfaction. In any event, I stayed by it steadfastly a whole day, mounting and remounting, stereoscope always in hand, following closely my teacher's directions.

That night, however, no sleep came to me; instead, a most painful eyache set in, which nothing but a liberal dose of eye water and much resting were able to relieve. It is needless to add that, notwithstanding this, I consulted my prints many times the next day, verifying their alignment and correct mounting:



MOONLIGHT ON THE ESTUARY, Oakland, California

but each time experiencing the same peculiar vertigo and eyecache that had left me sleepless the previous night. I at once suspected that the trouble arose from some inherent defect in the stereoscope or the mounting; I could not, of course, tell which.

It happened at about that time that, owing to pressure of other duties, I was compelled to forego the work for several weeks. One day, however, while rummaging through some old odds and ends on one of my shelves, I happened upon some stereo slides of London make and dating back to 1862; also a book on stereoscopy, the very branch I was becoming so engrossed in.

While devouring its contents, as one may readily believe I must have done, I happened upon a sentence that proved a veritable revelation to me. In it the writer advocated the use of prints of a width of two and one-half inches and mounted on centers two and one-half inches apart, as giving the best results. Instinctively I felt that in this suggestion was contained the clue to the solution of the problems that had so vexed me at the outset.

I immediately measured my London slides accurately and found that each print was two and one-half inches wide by three inches high, and centers exactly two and one-half inches apart. This induced me to make a new set after the manner of the imported slides and following the directions given in the volume I had read.

From that day to this I have never once experienced eye strain or trouble of any kind.

What probably pleased me at the time as much as the absence of eyecache was the discovery that, whereas I had been using 5x7 plates and 5x7 printing-out paper to get a double print of really 2½x3 size for each side, much better results were now made possible at considerably less expense; not to speak of the



FALLS IN DIMOND CANYON, Fruitvale, California

WHY IS STEREOSCOPY NOT MORE POPULAR?

trouble involved in the exact trimming of the prints. Accordingly I made haste to change the size of my camera, cutting it down to $3\frac{1}{2} \times 6\frac{1}{2}$ this time.

The slide, "Moonlight on the Estuary," herewith illustrated, was made with this new camera. Much waste was still inevitable, but it was certainly quite an improvement over the prints obtained with the larger apparatus.

This same wastefulness and trouble, at the time I speak of, existed with all stereo cameras on the market. It was only when the "Brownie" stereo was launched that improvement set in. When using this camera, I quickly found that all that was necessary for the operator to do was to transpose the negative, or the prints after trimming same to the two and one-half inch width. All the bother was left out. I still clearly remember the feeling of relief first experienced when using this small apparatus. To this day I have found none on the market able to replace it in efficiency and time-saving.

My usual procedure in mounting stereo prints is possibly a crude one; but as it answers the purpose thoroughly, I venture to briefly describe it. I cut the clear portion of each end of my negatives, transpose them, and then fasten them together with surgeons' plaster. When using the "Brownie," I find that I obtain in this way a pretty steady center separation of two and five-eighths inches.

In future, however, I shall include in the trimming about one-sixteenth inch of the negative or picture itself, so as to reduce the distance between centers to the two and one-half inches, which I find particularly suited to the average vision.

As a proof of the need of this extra trimming down, I will suggest to any reader sufficiently interested the trying of the following experiment:

Take any good stereo negative; mount the first print from it as is the general custom, about three inches on centers; the second one, two and one-half inches, and the third, two and three-eighths inches. Then examine them carefully through the stereoscope. Very probably your experience will be a duplicate of mine; the first print will cause eye strain, the divergence between centers inducing this; the second and third ones will prove satisfactory, but more particularly the second, as the convergence of visual axis required in the case of the third one is done away with. In other words, in almost all cases, the second mounting will be found the more satisfactory.

For a while the reason for this was shrouded in mystery for me. But observation soon determined this as lying in the almost universal separation that is to be found in the pupils of white races. In other words, it is very seldom that the pupillary distance in the white man exceeds two and five-eighths, or is less than two and three-eighths inches.

I have had opticians and doctors furnish me the result of one year's observations on this point, and in every case the average pupillary distance was two and one-half inches. In very rare instances this was found to be as low as two and one-fourth inches; and in only one instance out of hundreds under examination did it measure two and seven-eighths inches. The optician who reported this one to me admitted that it was a most remarkable case.

This establishes as definitely erroneous the practice, generally followed by makers of stereographs, to mount prints at a distance of three inches between

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centers. Practically all stereo views on the market are similarly separated, and some even show greater distances.

I have in my possession some otherwise excellent stereo slides from London made in the sixties, also a number made in 1867 in our own Yosemite Valley, which are absolutely without stereoscopic value to me or to any one else, because of this defective separation. These views were made at a time when stereoscopic photography was at the highest point of its popularity, by professionals, so called, who knew little or nothing of true stereoscopy and cared only for immediate returns from the then prevailing craze.

To the work of such men is directly traceable the decline in popularity of this beautiful and fascinating art. Similar strictures might even be passed in relation to the early printed stereographs sent out of the "Brownie" stereo camera's work. These were invariably mounted three inches on centers, and I know of no one to whom I submitted them that did not feel discomfort in viewing them through the stereoscope.

This method of mounting has unfortunately also been the one very thoughtlessly adopted by the majority of amateurs. The eye strain entailed by it has no doubt been the true cause of the discouragement felt by them at results that might have been otherwise most satisfactory.

I wish that I could induce some of these to take courage unto themselves and give my suggestions a trial. Better still, I wish some enterprising camera manufacturer might be induced by them some fine day to place on the market a "really truly" accurately designed stereo camera that would use a $3\frac{1}{2} \times 6$ plate, and film, interchangeably, with rising and falling front. Such a camera should be so constructed as to allow a separation of three inches between centers of lenses. The reasons for suggesting such a mounting are, first, that it brings the axis of each lens over the respective center of its part of the plate or film; and, secondly, it slightly increases the apparent relief, a condition never to be despised. In the trimming the extra width of print can be easily reduced.

I will wager that the pioneer manufacturer in this line will not only find ready sale for his apparatus, but that in all probability his efforts will tend to restore stereoscopic photography to its erstwhile popularity. It seems truly a great pity that an art that is fraught with such charming possibilities as this is, and can be made a source of such uncommon fascination to the initiated, should, for want of a little observation and correction, be allowed to decay and fall into decline as it has.



PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

CEMENT CRACKS IN FLOORS: Cracks in floors may be neatly and permanently filled by thoroughly soaking some newspapers in paste of half a pound of flour, three quarts of cold water and half pound of alum. The mixture must be about as thick as putty. It may be forced into the cracks and crevices with a knife and it will harden like papier mache.—L. B. H., Michigan.

WASHING PRINTS: If one has a washing machine at home, the kind used for washing clothes, he can readily convert it into an excellent print washer, especially if it is run by water power. Fill the tub about half full of water, put in the prints and start the motor slowly. If the machine is run by water power, and if the water is in a clean condition, the exhaust may be run into the tub and allowed to run out at the bottom, giving one a real print washer. If the machine is run by other power, change the water after ten or fifteen minutes, or the water might be run into the machine by means of hose from a tap.—Morris Goodman, Indiana.

TROUBLESOME COVERS: On page 570 of the December issue, E. L. F. advises one to place the jar upside down in enough water to cover the top and leave for half an hour or longer to loosen it. It would seem to me that if one wanted to use paste he would not care to wait half an hour or longer before being able to get at the contents of the jar. If he will do as my "Granny" used to do with the covers of fruit jars, which are practically the same thing, he would save twenty-nine minutes by simply inverting the jar and allow the cover to remain in very warm water for one minute.—Louis R. Murray, New York.

POSSIBILITIES IN YOUR NEGATIVES: Do not ignore the possibilities of certain portions of your negatives for enlargement, even when the whole negative would appear undesirable from an artistic point of view. Ofttimes one negative will yield two or three beautiful and striking enlargements in different proportions. Study your negatives and work out these latent possibilities. The color of a print is also to be considered. Sometimes a print that is lifeless in black will appear to magnificent advantage in sepia or green. Dot out the unsightly dust specks or other blemishes in the negative with India ink or other opaque substance, using a fine brush for the purpose. Then on the finished

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enlargement go over the resulting white spots with light touches of pencil or faint India ink.—V. A. Wood, New Jersey.

DISCRIMINATION IN PHOTO-TINTING: Use discrimination in the selection of colors when you tint your prints. I recently saw a beautifully tinted photo of three roses on one stem, but one rose was pink, another red, and the third a gorgeous yellow! Such a combination is rather rare in nature.—V. A. Wood, New Jersey.

NEGATIVES FOR PURCHASE: In choosing negatives for purchase, the above-mentioned photographer rejected those in which persons or groups of persons were posed if the faces showed sufficiently for recognition. He explained that he had to be extremely careful in this respect, as sometimes a "fool lawyer" (as he put it) would bring about a prosecution in case he happened to recognize the subject and found out that permission had not been expressly given for the publication of the picture.—V. A. Wood, New Jersey.

TRIMMING ENLARGEMENTS: Few amateurs possess a trimmer that will accommodate large prints, and when it comes to trimming enlargements, they have recourse to a knife and ruler, which does not always give satisfactory results. Instead of the ruler, I use a strip of glass cut four inches wide and eighteen inches long. In place of the knife, I took one of my father's safety razor blades, "without his permission," of course, making a handle for it by inserting it in the split end of a hardwood stick and putting small screws through both at the places where the holes come in the blade. By trimming his enlargements with these two simple utilities, one will secure the best possible results.—Frank Sterrett, Oregon.

AN EXCELLENT DEVELOPER: A developer which I have found excellent can be made by mixing the following:

Water	50	ounces
Metol	2	drachms
Hydroquinone	1	ounce
Sulphite of soda.....	33 $\frac{1}{4}$	ounces
Carbonate of soda.....	13 $\frac{1}{4}$	ounces
Bromide of potassium.....	1	drachm

For glossy paper add a few drops of iodide of potassium. This is an excellent developer for Azo paper.—A. G., New Jersey.

A HYPO-PADDLE: When developing Velox or other gaslight prints it is important that each one should be moved about as it goes into the hypo bath. In order to keep my hands free from the hypo, I have a wooden paddle about eight inches long attached to about six inches of quarter inch rubber band, and that in turn attached to a string sufficiently long to keep the paddle suspended just over the hypo tray. There is then no danger of this paddle slipping into the solution and its handle becoming contaminated with hypo, it is always within handy reach and the arrangement avoids the necessity of laying it down or balancing it on the edge of the tray.—Louis R. Murray, New York.



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A PHOTOGRAPHIC MONTHLY

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The San Francisco Photographic Association

The Retail Trades Committee of the San Francisco Chamber of Commerce called a meeting of the photographers and kindred lines of this city at the Chamber of Commerce on February nineteenth. The second meeting was called for February twenty-seventh. At this last meeting, attended by President William T. Sesnon, of the Chamber of Commerce, and M. Van Vliet, of the Executive Committee of the Retail Trades Committee, permanent organization was effected and the following officers elected: Otto Boye, President; Burr McIntosh, Vice-President; Fayette J. Clute, Secretary, and R. B. Marsh, Treasurer. Routine business covering by-laws and the like was transacted. The feature of the meeting was President Sesnon's explanation of the Chamber's plans to benefit the retailers of San Francisco. It is the aim and desire of the Chamber to organize each branch of retail business and have each such organization appoint two members to represent the organization in the membership of the Retail Trades Committee. President Sesnon pointed out the advantages of combined action, not only of the several trades, but in connection with the Chamber. Regular monthly meetings will be held by the new photographic organization and there has already been no little preliminary work done along several lines of activity that will benefit the local photographers and dealers in photographic supplies.

Photography at the Panama-Pacific

With a full appreciation of the importance of photography, the management of the Panama-Pacific International Exposition to be held in San Francisco in 1915, desires that it be represented by an exhibit as comprehensive and representative as possible, particularly in the class devoted to pictorial work. While a preliminary letter asking for consideration of the desirability of exhibiting will shortly go out to manufacturers and others, it has been found impossible to secure anything approaching a complete list of these pictorial workers who might participate, to whom a similar letter ought to be sent. For this reason it is deemed advisable to address the officers of the photographic clubs, societies and the like, and also the photographic press, asking their co-operation in apprising these individual pictorial workers of the desire of the management that they participate. Such a letter will go forward before this reaches the eyes of our readers. It will suggest that the pictorial workers individually write Theodore Hardee, Chief of the Department of Liberal Arts, Panama-Pacific International

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Exposition, San Francisco, asking for a blank application for exhibition space. Clubs, societies and other organizations contemplating exhibits made up of the work of their members will kindly do the same should they not be reached by this preliminary letter mentioned above.

For the information of our readers, we would advise that the entire photographic exhibit will be housed in the Palace of Liberal Arts and will be classified as Group 33, Equipments, Processes and Products of Photography. This group will be divided into three classes, numbered 122, 123, and 124. Class 122 will consist, briefly, of the materials, apparatus and instruments of photography, including moving pictures; Class 123, of negative and positive photography of every kind, including photogravure, photolithography and the like; and Class 124 will comprise only pictorial photography.

This arrangement has seemed to the management to be more desirable than the one pursued at St. Louis, where certain portions of the photographic, ceramic, architectural and other exhibits were included in the Fine Arts display, causing a splitting up of such exhibits that robbed them of much of their educational value, this last being the primary aim and object of an exposition of this universal character.

Recently, in order that the Chief of the Liberal Arts Department might have as far as possible at his call such knowledge of the activities in the domain of photography as is available, a Special Honorary Advisory Committee, consisting of Will Sparks, Howard C. Tibbetts and Fayette J. Clute, was appointed. This committee, composed of men having the interest of both the Exposition and photography at heart, will, working in conjunction with the Chief of the Liberal Arts Department, use its best efforts to the end that a display as comprehensive and educational as possible be presented in the section devoted to photography.

Inter-Mountain and Colorado at Kansas City

Advice has been received from Secretary-Treasurer LeRoy Kellogg, of the Inter-Mountain Association, that the members of the boards of both the Colorado and the Inter-Mountain Associations have mutually agreed to postpone their scheduled joint convention and go in a body to the National Convention at Kansas City. The photographers making up the two associations are very enthusiastic over the plan and are anxious to help make the National a success, this being, for many of them, the first time that it has been convenient for them to attend.

Mr. Topliff Visits the Coast

George W. Topliff, vice-president of the Ansco Company, spent several days in this city early in March. Although his visit was mainly in the nature of a vacation for himself and wife, time was found to drop in on most of the local trade, so that he was quite well known and received no little applause at his speech at the monthly luncheon of the San Francisco Photographic Association on March sixth. Mr. Topliff has made himself quite popular here and it is hoped that he will carry out his intention of being a frequent visitor in the future.

Oliver H. Bodine Here

Mr. Bodine, the genial representative of the Wollensak Optical Company, is covering Pacific Coast cities, spending a week in this city. Although his first trip into this territory, he found himself far from being a stranger to the photographers and the trade here. He has made a host of friends during his short stay, and of course advertised and sold the products of his house in his own inimitable way.

The Housh Line Presented

Don M. Harris, representing the Housh Company, of Boston, recently spent a few days here renewing old acquaintances and making out orders to be mailed the firm. He showed a new, patented loose-leaf album of excellent design that should add greatly to the value of the excellent line he represents. Mr. Harris enjoys the full measure of popularity and is always a welcome visitor here.



Photography at the Panama-Pacific Exposition A Protest

In the March issue of *CAMERA CRAFT* and in the recently published syllabus of the Exposition Committee, we are advised that the entire photographic exhibit has been relegated to the Department of Liberal Arts and denied a place in that of Fine Arts. I believe this decision to be in every way as unfortunate as it is unjust and that its final results will be prejudicial to the Panama-Pacific Exposition to an even greater extent than to photographic art; and I beg leave to set forth as shortly as I can the issue involved, that there may be no ground for mistake as to the course to be pursued by those interested in the future of the youngest member of the fine arts.

It is to be understood that the arts are divisible into two primary divisions. In one are those the end of which is the production of a thing of utility, a building, a vase, a piece of furniture. However beautiful these products may be, they are not created primarily for their beauty, but for their use. Furthermore, the skill or handicraft required for their production is often divorced from the brain in which they were conceived. Such are the Liberal Arts.

On the other hand, the product of those which fall under the division of the Fine Arts have no necessary or implied relation to utility; the end they seek is to excite an emotion. They embody the concept of a human mind, and, through the medium employed, give it form and being; and, whether as poem, song or picture, they appeal to the spirit alone.

Between these two groups photography has, until comparatively recently, occupied an anomalous and uncertain position. Just as pigments and brushes find their chief use in painting fences, walls and floors, so cameras, plates and paper are for the most part concerned in purely utilitarian work. No one

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dreams of classing a mechanically produced photograph of a piece of machinery, a photomicrograph, a Bertillon record, or even the average portrait photograph, as Fine Art. However excellent the technique, there is nothing essentially present but skilful handicraft.

Early in the history of photography, artists sought to use the camera in the interests of Fine Art, but, for the most part, gave up photography as a medium too refractory. The artist's concept and its photographic product were too far apart. However, as the years passed, new possibilities were offered; lenses, plates and printing media became amenable to control. Slowly at first, but in ever-increasing numbers, men with art training and knowledge practiced and perfected these new methods until, at this time, it is possible for the artist to express his conception as fully by photographic means as by any other monochrome medium. Though the technique is more difficult to acquire than that demanded of the draughtsman or etcher, there are possibilities latent in photographic Fine Art that justify any expenditure of time in its mastery. Not a few men of genius have devoted that time, and their skill has given inspiration and birth to pictures as individual, beautiful and auto-interpretive as the highest standard of criticism can demand.

That such are entitled to the appellation of Fine Art no unprejudiced critic can deny. Nor is it denied. In the most rigorously selected exhibitions of Europe and of this country, photographic work of this class has been hung with, and judged on the same basis as, other examples of graphic art. The men who have spent their lives in devotion to their vocation see greater things ahead as more men of genius and training are led to take the same road. They ask no favors, they demand no consideration of the difficulties inherent in their medium. They do demand that the children of their brain and hand be judged on the same basis as those of workers in other media; and they demand this, not in the interest of their own reputations, though that would be justifiable, but that the growth of their chosen art should not be stultified by a tacit denial of that for which they have labored, namely, the development and recognition of photography as a means of individual expression.

The plea is set forth that the action of the Exposition Committee is based on the limitations of space. The contention is invalid. Had there been but a few square feet set apart in the Department of Fine Arts, and the best we could send hung therein, this protest would not have been penned; but, as it is, the writer believes that he voices the opinion of those who have the best interests of their vocation at heart when he advises all who have produced pictures in the spirit and interest of art to abstain absolutely from exhibiting. Photography, the world and this Exposition would benefit by giving photographic art the fair treatment that was accorded it at Brussels, Leipsic, Pittsburg and elsewhere. Not receiving that, there is no possible answer but to stay away and await an opportunity from a more enlightened tribunal.—H. D'ARCY POWER, M. D.

Next to acquiring good friends, the best acquaintance is that of good books.
—C. C. COLTON.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

A Correction

In this, "A Photographic Digest," department in the February issue was given a formula for a metol-hydroquinone developer for the rapid development of films and plates. Through a printer's error, the amount of hydroquinone, two hundred grains, was omitted. The omission occurs in the fifth paragraph of the article commencing on page 88 and readers who save their copies for future reference will do well to turn back and make the proper notation on the inside margin of the next page near the incomplete formula.—H. D'A. P.

The Motor Headlight as an Illuminant for Evening Work

Acetylene burners of a very powerful kind fitted in a lantern with suitable reflector and lenses are now very extensively used on motor cars. There must be many readers who have such an illuminant at their disposal; and some of them may already have attempted to employ it in their photographic work.

The two features about the acetylene flame are its small, intense character, and its whiteness; and both of these give it value for photographic purposes. Being very small, it can be dealt with by means of a lens or a mirror in a more definite manner than a larger flame and is more manageable in a lantern; while its whiteness, which means its richness in green and violet rays as compared with most artificial lights, means also that in proportion to its visual intensity it is a photographically powerful illuminant.

It must not be assumed from this that there is no gain in using orthochromatic plates when acetylene is employed. Practically all forms of artificial light available for photographic work at all are proportionally richer in red and yellow rays than is daylight, although they vary very widely amongst themselves in the extent of difference. So that there is always some gain in the employ-

ment of orthochromatic plates for artificial illuminants. There is, of course, no advantage to be obtained by using a color screen or light filter in such a case; at least none at all commensurable with the disadvantage caused by the increased exposure it entails. A very rapid orthochromatic plate, backed, is therefore what it is best to employ for winter evening negative making; and acetylene as the source of light is no exception to this rule.

It is probable that the best way of utilizing the acetylene plant of a motor car for photographic purposes would be to arrange a number of burners on a tube for this particular purpose, leading a pipe to them from the generator of the motor car. Suitable burners for the gas are now readily obtainable through any gasfitter; and the apparatus should cost very little to construct. By having the burners sufficiently spaced out, it would be very easy to make the source of light a large one, so as to facilitate diffusion. By arranging, say, nine or twelve of the burners in three rows, one above the other and a foot apart, a similar space separating the burners, a powerful and large source of illumination is secured very readily. There is no need for the rows to be exactly over each other. It would be better to incline the arrangement slightly, so that the heat from the bottom row, and the acetylene flame is a very hot one, would not fall full upon the upper tubes and burners.

If the burners are more or less a fixture in the motor lamp, and the photographer prefers to use his headlight rather than rigging up any special set of burners for photography, the case is a different one. The lamp has been specially constructed to concentrate the very greatest possible intensity of illumination in the path of the beam, this beam being slightly divergent. What light we have to use, therefore, instead of being in the form of a large, weak stream of more or less diffused light, is of a powerful and very local-

ized character. For certain kinds of work, this beam of intense light may be very useful. Some of the "effect" lightings should be more readily obtained with a headlight than with any other illuminant. By having it on the ground and directed upwards, the footlights of a stage can be suggested.

But for some work of this kind the headlight may seem, at first, to be too bulky and cumbersome. A large heavy lamp cannot always be introduced as the source of light in a picture without revealing its character. A dodge, however, which will allow it to be used where it might appear to be impracticable is the following:

The beam itself, although often quite visible to the eye, will not usually appear in the photograph. This enables one to use a small mirror, which then acts exactly as if it were the source of light.

For example, if we should wish to get the appearance of a man lighting a cigar, shading the burning match with his hands, he can actually hold a small mirror, such as can be bought for two or three pence, in the palm of his hand, and the beam of light from the headlight, cut down by a screen so that it is only about the same diameter as the mirror itself, may be arranged so as to fall on it. The headlight itself must also be kept out of the field of view; but the enclosure of the light in the lantern, and the concentration and limited direction which the lenses give to the beam, made it quite easy to direct the light so that it falls upon the little mirror and nowhere else. The mirror then acts as if it were the source of light, illuminating, in the case we have imagined, the cigar, hands, and face of the model. This method of working, with a mirror does not seem to be very well known; yet it certainly deserves to be; as it should be applicable to quite a number of similar purposes; while if it can be arranged under a lamp shade, other very effective lighting schemes can be carried out.

Should a general even lighting be required, such as one usually aims at in daylight work, then some form of diffuser is essential. The powerful concentration of the beam from the lenses of the headlight does not make diffusion any easier; but if the beam is allowed to fall on a large white surface, such as a whitened wall, a very soft lighting is to be obtained by the reflected light therefrom. Such a course, however, is subject to the

drawback that a great deal of the light will be absorbed and lost; and in winter evening photography we cannot afford to lose any that can possibly be saved, at least any that can be saved without actual loss of effect.

A muslin screen of the usual kind makes a capital diffuser for the light from a motor headlight if the front door of the lantern is opened well back out of the way, taking the lenses with it. The light still issues from the lantern in the form of a beam; but it has not the strength and limited direction of the light when this has passed through the lenses. A sheet of tracing cloth may also be used for this purpose; but all tracing cloth seems to have an inherent yellowness, even when its actual tint is bluish, and it prolongs the exposure more than most diffusers compared with the extent of the diffusion which it will yield.—H. Rowbotham in *Photography and Focus*

Bleached Lantern Slides

A correspondence and discussion has recently been going on in the *British Journal of Photography* concerning the use of these slides for projection. A writer in that journal found that mercurial bleached slides, without reintensification, gave excellent results on the screen. The matter has been dealt with editorially and it was pointed out that the use of such slides is by no means easy; and that excellent results can also be obtained by modification of simple bleaching, such as the use of mercuric iodide, which gives a richer and warmer color. I have personal experience of bleached slides in a different way. While making the experiments on the Traube process, I projected an iodide bleached slide, before coloring, and found that the image was an excellent brown tint. These iodine bleached slides are made by using iodide of potassium and ferrocyanide of potassium very much in the same way as the ordinary bromide bleach; the image they produce, one consisting of cream colored iodide of silver, is very stable. The editor of the photographic journal quoted, states that mercurial bleached slides ultimately undergo change, although they have also remained perfect in his hands. The iodide of silver slides, in my experience, can lie about in the room exposed to all conditions of light, including strong sunlight, and yet remain absolutely unchanged. I have one that has now been

A PHOTOGRAPHIC DIGEST

lying openly in the sun for at least three months, and yet it projects as well as ever.

The formula for the bleach is: Twenty grains of potassium iodide and forty grains of ferrocyanide of potassium to the ounce of water. It is to be remembered that when this is used there is a very marked intensification and that if it is required to use the slides for projection a thin slide should be taken, otherwise the density may be too great.

New Bromoil Bath

The following formula, by Herr J. Swilkowski, is translated by the *British Journal of Photography* from the *Vienna Mittheilungen*:

Copper sulphate	190 grains
Potassium bromide	160 grains
Ammonium Bichromate	85 grains
Hydrochloric acid, chem. pure	7 drops
Water	4 ounces

This is a stock solution which, for use, is mixed with four times its bulk of water. Bleaching occupies about five minutes, and after a brief rinse the prints are placed for about five minutes in a one per cent solution of hydrochloric acid. Here they become completely bleached, and are then fixed for five minutes in an acid hypo bath in order to remove the silver bromide formed in the film from the action of the copper bromide. After a wash in five to seven changes of water they are ready for pigmenting.

In the case of prints of great contrast the bleaching bath recommended is as follows:

Copper sulphate	70 grains
Sodium chloride	35 grains
Ammonium bichromate ...	120 grains
Hydrochloric acid	5 drops
Water	5¼ ounces

This bath tends to reduce the contrast, doubtless as the result of the greater proportion of bichromate. It is immaterial whether the bichromate salt be that of ammonium or potassium, so long as the rule be borne in mind that four parts of ammonium bichromate correspond with five parts of potass bichromate.

Positive Prints In Dyes

Gentlemen: In your valuable issue of January nineteenth last, you describe a method by Dr. H. D'Arcy Power for the dye toning of lantern slides. Following up the idea I have made an experiment with the view of

utilizing the principle for direct positive work. I copied a cabinet photograph in the camera on to bromide paper, exposing it rather fully, developed it in a quick metol-hydroquinone developer, washed it, and exposed it to artificial light, face upwards, till the whites were tinted. I converted the image into silver iodide by applying to it a warm solution of a few grains each of potass, ferricyanide and potassium iodide. After some washing I put it in a hot bath of negrosine solution for a few minutes.

I then subjected it to a hot hypo. bath, the negative image and gelatine melted away, leaving a positive behind in pure dye. The result was a deep positive print, commendable for line work and the reproduction of plans. It lacked half-tone rather sadly; perhaps more exposure to artificial light, or exposing both sides of the bromide paper might have improved it. I am bringing the above before your readers so that those of greater ability than mine may perchance evolve a practical bromide positive process, the advent of which promises immediate gain in definition and economy. Yours faithfully, A. Cohen.—*British Journal of Photography*.

The Acid-Amidol Developer

Attention was recently drawn in this department to the new properties stated to be possessed by acid-amidol by Messieurs Balagny and Monpillard. They found that the image, in place of being developed on the surface of the film, was chiefly produced next the glass. The advantage claimed for this was that such development yielded better reproduction of gradation in both highlight and shadows. The subject has recently been studied further by Herr O. Mente, who gives in: *Das Atlier*, a full account of his investigations. This is translated in the *British Journal of Photography*; where, according to this writer, the claims made, while partly true, do not seem to be borne out in practice in a satisfactory way. He finds that if the image is to give the results promised the exposure must be very long, in which case there is a loss of detail in the headlights not compensated for by an increase in the shadow detail. Furthermore, Mente states that large quantities of developer produce silver throughout the film and consequent flatness, whereas excess of the acid sulphite gives a negative with surface development, that prints in the ordinary manner.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

A Photographic Barometer

Under the above caption I gave directions for making a gelatine solution, which, through lack of care in transcribing some of my old notes, were rather incomplete. It will perhaps be best to repeat the entire paragraph, making the necessary corrections therein, as follows: An amateur friend has been pleasing numbers of his acquaintances by presenting them with what he calls his "Barometrical Boy." This is a bromide print made from a negative of his son dressed in a light-colored sailor suit. The method of procedure is as follows: The print is first hardened in a formaline bath, one in twenty, and then that part representing the boy's clothing is given a coating of gelatine solution, one made by dissolving, by gentle heat, about one hundred grains of gelatine in four ounces of water, to which is later added thirty grains of chloride of cobalt and twenty drops of glycerine. The result is that the clothing of the boy appears blue in fair weather and pink in damp, due to the well-known action of moisture on cobalt salts.

A Plea For The Record

A large number of out-of-town amateurs drop into my office as they are in the city, and of course they are all enthusiasts. They usually bubble over with photographic plans, ideas, experiences, and the like. They are doing this and that and they intend to do still other things; and, while they are telling about it, their course seems the only right one to pursue. Of course, in their particular case it is, because they are following the lines that give them, individually, the most pleasure and gratification. But one came in the other day with a line of argument that, while not new and startling, seems worthy of wider circulation than he can give it unaided. His contention is that amateurs generally are almost criminally negligent in failing to make a good series of photographic records of such scenes and activities as are

typical of their location. He claims that no particular place is entirely barren as to such subjects, and really, despite the fact that his own locality is somewhat unpromising, he has about proven this contention. Historical subjects are of course important; and, even despite the obvious nature of this statement, the amateur residing near them rarely if ever takes the trouble to photograph them, only to regret not having done so when too late. Then there are special industries or methods of work that are characteristic of certain localities, certain farm crops or agricultural methods that are distinct. Perhaps certain stores or shops that are being superseded by a newer type still continue in business in the amateur's home town. The same with systems of street lighting, a certain type of even so commonplace subjects as sidewalks and fences. It is not so long ago that I received a letter asking if by any chance I had a negative made in a certain city in the Middle West where I had done some photographic work nearly fifteen years ago, showing the limestone stepping stones then quite common there as a substitute for sidewalks in the hilly portions of town. Not a single such negative could be located in the city itself. This brings to mind the vain search of another party who wanted a good picture of a certain tree that was a local landmark until destroyed during a heavy storm. Not a picture could be found. Still another example comes to mind, this time with good prints obtainable. Near a certain small city the most traveled road ran, at one time, through a little strip of wood, skirted a rather steep though trifling declivity and passed over a decrepit wooden bridge. This road was the one used by the population for their trips to the next town and for the then common pleasure of buggy riding. And this one spot on the road, while not at all famed for scenic beauty, was more interesting than the rest and of course was the most remembered and most familiar. One day the high-

THE AMATEUR AND HIS TROUBLES

way commissioners saw fit to "improve" the road by eliminating this bit of winding way and constructing in its place a long, straight grade ending in an iron bridge. An amateur in the town happened to have a good negative of the scene; requests for prints awakened him to the possibilities, and copies were made and placed on sale. The demand was most gratifying; and, instead of falling off, has slowly increased for the past year. Not that I would urge record work on account of the profit to be derived, but the above instance proves that such pictures have a value, despite the fact that they lack art quality. But to return to my visitor and his plea for record work. He is, primarily, interested in artistic photography, but he has taken up the work in question as a sort of "school" for his technical improvement. In his locality there is also a landmark tree and he has made some dozen or more trips to it in order to secure negatives under varying conditions. We can well believe him when he says that he has learned more about atmospheric conditions and seasons in relation to the photographic portrayal of a scene, by his repeated exposures on this one subject, than he could possibly have learned by making many times that number of exposures on varying ones. In addition, he has two excellent negatives of this tree that will some day be a great credit to his forethought and care. Possibly more of a credit to him than any of his efforts at artistic photography. And the value of this tree as an object for experimental study has inspired him to look for other subjects suitable as records only. The result is that even the metropolitan journals know of his work and turn to him when they want pictures of a certain kind, even though his own particular locality is not the most representative in all cases. The matter is certainly one worthy of consideration by the amateurs as a class, particularly in relation to the experience that can be gained through having some definite subject to work upon.

The Need of a Lens Shade

I wish I could get every user of a camera to try the efficiency of a lens shade, particularly those using the modern anastigmat with its typically short front hood, if the narrow band of brass at the front can be so designated. If one will but examine some of the

older types of lenses in the rapid rectilinear class, he will be forced to conclude that there must have been some reason for the generous hood that formed part of the lens mount. Such a mount would add to the already quite sufficient weight of the anastigmat and it would also prevent the lens from being used for a wide-angle one on a larger camera. But the weight problem can be gotten over by using a lightly constructed shade that folds for the pocket or camera case, and the same expedient leaves the lens available for wide-angle work should the owner so desire. The ideal lens shade is one made funnel shape, the small end gripping the front of the lens with the other a few inches in front, a parallelogram in form and of a proportion corresponding with that of the plate. One of the neatest ones we ever saw was the result of taking a block of wood, 4x5 inches square and about four inches long. This was made to taper, pyramidal fashion, from one end to the other. Then another block was taken, a round one, having the same outside diameter as the lens front, and attached to the pyramidal block after having sawed off the small end of the latter at the place where its smallest diameter corresponded. The corners of the latter were smoothed down where they met the round block and then this form was sent to a machinist, who provided just the right size and quality of spring brass wire and wound it on the block to make a spring that looked something like those used under beds, although, of course, not so strong. This had only to be covered with thin black cloth to provide a hood that could be compressed into a flat package and carried between two hinged pieces of card. When extended, that portion of the spring that had been wound around the round stem of the form gripped the lens front firmly, while the front or main part of the spring, that part wound around the pyramidal part of the form, extended forward with a 4x5 opening in exact proportion to the 8x10 plate used in the camera. As originally made, the spring was a little to "springy" and carried the 4x5 opening so far forward that it cut off a little around the edge of the plate, but this was easily overcome by adding two pieces of stout, small cord, one at each side, to keep the spring from extending to its full release.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

To South Dakota Members

If the members in this State will forget the going astray of the first two, and help me to start a circulating State Album again this year, I will be only too glad to furnish the album, mount and arrange the prints therein, and attend to the routing of same to you who have contributed prints. This time we will use more care to see that the album is not allowed to become lost and every member on the route list will be called upon to report the receiving and forwarding of the album promptly. It is only by their so doing that the album can be kept from going astray. But send me in a supply of prints so that the album can be made up at once. Let us all get together and show the members in other States that we can get out an album that will be as interesting as theirs. After the album circulates over the route list made up of the members in this State who contribute to it, it will be exchanged for one from another State, and this other circulated over the same route list.

Yours for a good South Dakota album,
C. B. Boles, S. Dak. Album Director,
Lock Box 351. Aberdeen, S. Dak.

Attention, Illinois Members

Illinois Album No. 7 has almost completed its route, and while Album No. 8 is being made up, a few more prints are needed before it can start out. In fact, your Album Director would be pleased to have you send in a good collection of your best prints to the end that this No. 8 could be made larger and better than any of its predecessors, and this done at once.—George A. Price, Album Director, Urbana, Illinois.

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

George E. Moulthropo, Director Lantern Slide Division, Bristol, Conn.

Edward B. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NEW MEMBERS

3584—E. H. Newcomb, Neosho, Mo.

3½x5½, developing paper, of school information, landscapes, and views; for the same. Class 1.

3585—E. V. Bargamin, Elk City, Idaho.

3¼x1¼, 5x7, and stereos. developing paper, of nature studies and mountain scenes; for anything of interest. Class 1.

3586—R. W. Ren, Ellensburg, Wash.

Class 2.

3587—Pearl Kinzer, Oakland, Iowa.

3¼x5½, developing paper, of landscapes and items of general interest, for mountain, marines, etc. Post cards only. Class 1.

3588—Chas. A. Hetrick, Oakland, Iowa.

3¼x5½, developing paper, of landscapes, farm scenes, etc.; for Eastern and Southern farm scenes. Cards and prints. Class 1.

3589—B. P. Angle, Tomahawk, Wis.

Class 2.

3590—R. O. Higbee, 422 Maple Ave., Modesto, Cal.

3¼x5½, various papers, of landscapes, buildings, etc., for landscapes, marines, artistic nooks, either natural or otherwise, others which have a spark of general interest. Class 1.

3591—Alex. Dowell, Mercer, Ore.

Class 2.

3592—B. E. Whiteher, Lexington, Mass.

Class 2.

3593—C. G. Hoover, Ladysmith, Wis.

Post cards and 5x7, various papers, of animals, birds, aboriginals, and old ruins; for the same and mountain scenery. Class 1.

3594—Farrell B. Sowers, Box 18A, Maricopa, Cal.

3¼x5½, various papers, of mountain, oil country, and animals; for miscellaneous subjects. Class 1.

3595—Major Wm. R. Eastman, Md. Corps, U. S. A., Columbus, N. M.

Class 2.

3596—George Ayers, Box 17, Lathrop, Mich.

5x7, developing paper. Just a beginner. Class 1.

3597—Elmo Patch, K-21, Vancouver Barracks, Wash.

Class 2.

3598—E. B. Houghtaling, Box 334, Dawson, Yukon Ter., Canada.

Class 2.

3599—F. F. Hyatt, 5648 Askew, Kansas City, Mo.

Class 3.

3600—W. W. Dennis, 322 7th St., Donora, Pa.

Class 3.

3601—Carl Hauritz, 401 Cedar Ave., Minneapolis, Minn.

Class 2.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

- 2602—C. V. V. Turner, 221 Miller St., Helena, Ark.
3¼x4¼, of scenes on the Mississippi River, also ocean liners, skyscrapers, New Orleans, canal boats, fishing schooners, Mardi Gras, crowds, funny children, etc.; for river views of New York and San Francisco, ocean liners, trains, views off high buildings, etc., including trick pictures and curiosities. Class 1.
- 3603X—W. C. Caldwell, Humboldt, Kan.
Good views of this vicinity, southeastern Kansas, on post cards; for views of interest from other localities. Class 1.
- 3604—H. G. Raveling, Brentford, S. D.
5x7, 4¼x6½, and post cards, various papers, of mostly farming scenery along with a few landscapes; for landscapes or street views. Post cards only. Class 1.
- 3605—Paul A. Wolf, 707 Eleventh St., La Salle, Ill.
3¼x5½, developing paper, of scenes in woods, outdoor scenes in general, groups, portraits, etc.; for portraits, scenes, or any thing of real interest. Post cards and prints. Class 1.
- 3606—Sam M. Thomas, Box 407, Catlettsburg, Ky.
4x5, and 2¼x3¼, developing paper, of inside and outside portraits of groups and individuals; for the same. Class 1.
- 3607—H. L. Feltes, Box 270, Arcadia, Wis.
Post cards and prints up to 8x10, various papers, of mostly views and portraits, also views in natural colors; for the same. I do not wish any for exchange except No. 1 work. Class 1.
- 3608—F. E. Swanson, 1219 M St., Aurora, Neb.
Post cards and 4x5, developing paper, of Yellowstone Park, Colorado, New Mexico, and Illinois scenery, and taxidermy specimens; for Western scenery, land or water. Good work in 4x5 size. Class 1.
- 3609—H. H. Stickney, Jr., Box 1064, Lyons, N. Y.
Class 2.
- 3610—Chas. W. Schleiffarth, M. D., 8 South Broadway, St. Louis, Mo.
Class 2.
- 3611—Lee Darling, Modesto, Cal.
Class 2.
- 3612—Elmer O. Underwood, R. F. D. No. 1, Dufur, Or.
Class 2.
- 3613—Albert Hoepfner, Box 265, Crockett, Cal.
Class 3.
- 3614—D. W. Bagley, Moyock, N. C.
3¼x5½, developing paper, of all amateurish subjects except portraits; for any thing that I should see fit to keep, others I will return. Class 1.
- 3615—Winn Davidson, Ramona, Cal.
(After June 1st and until September 10th will be at 161 Alpine St., San Francisco Cal. No exchanging after September 10th.)
5x7, 4x5, stereo, 3¼x5½, 3¼ x4¼, bromide, platinum and developing papers, of a few good local views of mountain and desert scenery, and adobe houses; for prints only of school houses west of the Rockies, general views of mountain towns, mountain girls in everyday life. Class 1.
- 3616—Frank H. Wheelon, Big Eddy, Ore.
5x7, developing papers, of scenes, along Columbia River and The Dalles Celilo Canal; for general scenes of landscapes and historical places. Only 5x7 prints. Class 1.
- 3617—Hugh Gilmore, 2131 Marion St., Denver, Colo.
Class 3.
- 3618—Robt. A. Parker, 1119 Franklin Ave., Fresno, Cal.
3¼x5½ and smaller, developing papers, of landscapes, mountains, big trees, mostly; for landscapes, marines, historical, animals. I desire to exchange particularly post cards and lantern slides. Class 1.
- 3619—E. M. Addington, P. Q. & E. Co., Nevada City, Cal.
Class 2.
- 3620—B. F. Jones, Blythe, Cal.
Class 2.
- 3621—Geo. H. Scott, Box 601, Maysville, Ky.
Class 2.
- 3622—Miss Zoe Curless, care Bank of Liberal, Liberal, Mo.
Class 2.
- 3623—M. A. Booth, 60 Dartmouth St., Springfield, Mass.
Class 2.
- 3624—John Meek, R. F. D. No. 1, Murphy, Ore.
5x7 and smaller, developing paper, of views of mountains, valleys, etc.; for post cards only. Class 1.
- 3625—Harry A. Brodine, 854 Union Ave., Bronx, New York City.
2¼x3¼, 2½x4¼, 3¼x4¼, 5x7, and 8x10, various papers, of landscapes, marines, views of interest; for the same. Only good work desired in exchange for same. I also exchange post cards, full size. Class 1.
- 3626—Katherine McManness, 838 S. Main St., Findlay, Ohio.
Class 3.
- 3627—Benj. M. Smart, Box 730, Little Rock, Ark.
Class 2.
- 3628—Charles M. Davidson, 2302 17th St., N. W., Washington, D. C.
5x7, and 6½x8½, developing mostly, of public buildings, parks, etc., views and miscellaneous collection; for pictorial work, genre pictures, etc. Prints only same sizes. Class 1.
- 3629—Allan C. Browne, Van Wicklen Place, Ozone Park, N. Y.
8x10, and 4x5, various papers, of "news" pictures, street scenes and figures; for the same. Class 1.
- 3630—F. P. & A. W. Conrad, La Crosse, Kans.
Class 2.
- 3631—E. Felix Heberlein, 89 Hancock, East, Detroit, Mich.
2¼x3¼, developing papers, of artistic landscapes, animals, and nature in general; for the same. Class 1.
- 3632—Miss Ethel R. Tillson, Lock Box 125, Raquette Lake, N. Y.
3¼x5½, 3½x3½, and 4x5, developing paper, of Adirondacks, deer, moose, etc., domestic animals, lakes, camps, marines and snow scenes, etc.; for marine and landscapes, animals, genre, also mountain and historical. Class 1.
- 3633 Miss Elizabeth Murray, 312 Ford St., Ogdenburg, N. Y.
Class 2.
- 3634—L. J. Fremean, 202 No. 9th St., Phoenix, Ariz.
Class 2.
- 3635—C. C. Wendell, Box 631, Dunsmuir, Cal.
3¼x5½, various papers, of scenery; for landscapes, animals, historical scenes, and freaks. Post cards only. Class 1.
- 3636 John C. Peden, Fairland, Ill.
Class 2.
- 3637X—M. Fortney, 512 9th St., Moundsville, W. Va.
5x7, 4x5, 3¼x5½, developing paper, of landscapes and views; for scenery and any interesting subject. Post cards only. Class 1.

RENEWALS

- 1391—Louis R. Murray, 17 Hasbrouck St., Ogdenburg, N. Y.
Class 2.
- 1434—John Nelson, Box 34, Ericson, Neb.
Post cards of sod houses and Western views; for the same. Class 1; good post cards only.
- 1747—W. C. Cosgy, 1242 N. Fourth St., Abilene, Texas.
3¼x5½, developing paper, of landscapes, night scenes, views, and home portraits; for the same. Nothing but good work on post cards only. Class 1.
- 1756—George W. Given, 2771 Pratt St., Bridesburg, Pa.
5x7, developing paper, of city and park views of Fairmount Park Valley Forge; for any thing of beauty or interest, groves, rivers, etc. Class 1.

CAMERA CRAFT

- 1872—Frank Reeves, Stamford, Texas.
 $3\frac{1}{4} \times 5\frac{1}{2}$, 4x5, and smaller, developing paper, of children, genre, hunting, landscapes, and a few Colorado scenes; for hunting, fishing, mountain, and shipping scenes, and prefer them on post cards and especially any good foreign view. Class 1.
- 1895X—Arthur L. Burgess, 227 N. 20th St., Columbus, Ohio.
 $3\frac{1}{4} \times 5\frac{1}{2}$ and $4\frac{1}{4} \times 6\frac{1}{2}$, on post cards only, of landscapes, college views, ray filter and cloud views of general interest; for post cards of general interest, mountain scenery, historic places, ray filter work, etc. First class work sent out, and expect same. Class 1.
- 2009X—Dr. Chas. F. Meacham, Bellows Falls, Vt.
 First class post cards only. Class 1.
- 2202—H. H. Wiles, Aguilar, Colo.
 Class 3.
- Mrs. Franc Hagestead, Winnemucca, Nev.
 Class 2.
- 2790—M. Andrus Locke, 26 Buffalo St., Castile, N. Y.
 4x5, 5x7, $6\frac{1}{4} \times 8\frac{1}{2}$, various papers, of general river scenery, child studies, landscapes, marine studies; for North Canada snow scenery, marine and southern scenery. Post cards and 5x7 prints. Class 1.
- 2803—W. H. Hawkins, 3504 Union Ave., Chicago, Ill.
 Class 2.
- 2810—C. L. Fuller, 1101 W. 3rd St., Sioux City, Iowa.
 5x7 and smaller, developing papers, of landscapes, buildings and street scenes; for any thing of interest. Post cards or prints, only good work sent or received. Class 1.
- 2420—W. C. Brown, 730 Forest Ave., Evanston, Ill.
 Lantern slides, carbon and platinum prints. Class 1.
- 2823—Karl Zimpfer, 714 1st Ave., N. E., Independence, Iowa.
 $3\frac{1}{4} \times 5\frac{1}{2}$, and $1\frac{1}{2} \times 2\frac{1}{4}$, of river views, farm and miscellaneous subjects. Might exchange a few lantern slides, mostly post cards, good work for good work only. Class 1.
- 2824—Sam'l W. Wenger, Box 83, Knob Noster, Mo.
 Class 3.
- 2839—J. Henry Chinnery, Box 33, Scottville, Mich.
 Class 2.
- 2880—J. H. Helsley, 715 Grant Ave., Martins Ferry, Ohio.
 5x7, various papers, of views Ohio River and various scenery; for any thing good, post cards preferred, but will not refuse prints. Class 1.
- 2894—John F. Fensel, R. F. D. No. 9, Montpelier, Ind.
 Post cards of all kinds of views; for landscapes, views and railroad scenes. Class 1.
- 3272—Frederick C. Lee, Box 643, Delhi, N. Y.
 4x5, developing papers, of landscapes, miscellaneous subjects, and animals; for miscellaneous views. I desire regular weight prints 4x5. Class 1.
- 3299—Jack Murphy, Box 762, Anaconda, Mont.
 $3\frac{1}{4} \times 5\frac{1}{2}$, of mountains, rivers, lakes, hunting, and camping views; for any kind of good work. Poor work not answered. Post cards only. Class 1.
- 3306—Edw. Holmes, Box 395, Eureka, Utah.
 Post cards from $3\frac{1}{4} \times 4\frac{1}{4}$ to 5x7, developing paper, of views of mountains, and child photographs; for the same. Class 1.
- 3312—Mrs. Chas. Stavelly, R. F. D. No. 3, Reinbeck, Iowa
 Class 2.
- 3341—Frank A. Rice, Box 1125, Ouray, Colo.
 $3\frac{1}{4} \times 5\frac{1}{2}$, various papers, of general Colorado views, mountains, and waterfalls, a limited number of photos of Mesa Verde Cliff dwellings; for any thing of interest, post cards or prints, but post cards preferred, want foreign pictures especially. First-class work only sent out, and same expected in return. Class 1.
- 3442—Henley H. Hall, 7 E. Broad, Richmond, Va.
 5x7 and post cards, various papers, of landscapes, public buildings, and general scenery; for any thing that is interesting, railroad wrecks, etc. Class 1.
- 3345—R. D. Murray, 484 Wabash Ave., Detroit, Mich.
 Any size not exceeding $6\frac{1}{4} \times 8\frac{1}{2}$, developing paper, of picturesque views of streams, wharf and marine, for the same. Good work only. Class 1.

CHANGES OF ADDRESS

- 2243—Henry A. Hoyt, 556 North 16th St., San Jose, Cal.
 (Was Santa Rosa, Cal.)
- 3077—Edwin A. Scharmen, Box 45, Munising, Mich.
 (Was Traverse City, Mich.)
- 3096X—David Gibbs, Box 166, Zanesville, Ohio
 (Was Mt. Vernon, Ohio.)
- 3237—Midge Waterbury, Box 682, Kallispell, Mont.
 (Was Kallispell, Mont.)
- 3545—Mrs. Ina L. Cook, 45 Poplar Ave., San Mateo, Cal.
 (Was Tucson, Ariz.)

WITHDRAWALS

- 3424—William Holtmann, Lock Box 8, Valhalla, Ind.
 On account of lack of time.



The Photographer's Association of America

The Coming Convention

President Charles F. Townsend says: The thirty-third annual convention of the Photographers' Association of America, which is to be held at Kansas City, July twenty-first to 26th, inclusive, ought to be the best ever held in America. At this early date it would be unwise to make any estimate as to the attendance, or to boast of what will be offered, but the most conservative can be assured that the 1913 Convention ought to be the

best ever held by the Association for the following reasons:

First, it is to be held in the heart of the middle west, in a city second to none of its size in the world. Second, it will be held at a time when most photographers are not busy and prosperity reigns supreme. Never before in the history of photography has the general prosperity of the profession stood at a higher water mark. Third, every state association in the Mississippi Valley has

CLUB NEWS AND NOTES

decided to hold its meetings in abeyance and join in making the Kansas City Convention an enormous success. Hundreds of photographers who have never before attended a National Convention should lay plans to make this their summer vacation. Fourth, the officers are arranging a program along practical lines, one that will appeal to every one in the profession from a financial, artistic and technical standpoint. This embraces every live, wide-awake man in the business, big or little.

Let every photographer who is interested in the advancement of his own interests as well as in the development of his own profession, join hands and help boost this great Convention in July.

President Townsend has received word from Illinois that there will be three train loads from that State alone, and that arrangements have been made for the Inter-Mountain Association to hold their meetings in abeyance and join with the other state associations in swelling the attendance of the National. The President desires to thank these associations and all who have acted in accordance with this spirit. He would urge that they consider themselves a committee to arrange for the transportation of special parties. The convention hall being large, the Executive Board is enabled to provide special headquarters for every State. One afternoon will be left open on the program for meetings of the state associations in various parts of the Hall.

The Commercial Federation



The National Convention has, in the past, somewhat overlooked the interests of the commercial photographer as a class. This situation caused, at the last National Convention, the formation of what is known as the Commercial Photographers' Federation Association of America. The new federation will have its own business meetings at the Kansas City convention, where, it is understood, the executive board of the National Association will set aside time for this class of photographers. There will be a fine exhibition of commercial work, including arts and crafts, and the activities of the new federation will receive every encouragement from the manufacturers and dealers who are beginning to realize that the commercial photographers are larger users of supplies and apparatus than are the strictly portrait members. The federation will, at this coming meeting, take up the question of ethics and the establishment of some sort of a minimum price on the regular lines of commercial work and will consider other forms of activities that may result in a better condition of business for its members. The secretary of the federation is Ellery S. Caywood, 1309 Walnut Street, Philadelphia, Pennsylvania, and commercial photographers throughout the country should get into communication with him to the end that they may be advised from time to time as to what is being done along the lines of its activity.

CLUB NEWS AND NOTES

**Club Secretaries and others will oblige by
sending us reports for this Department**

California Camera Club

The club has proceeded with its various activities in a most energetic manner during the past few months. Demonstrations in various branches continue to be given regularly, and amateurs who desire to learn more concerning the practical side of photography should know that membership in the club is open to desirable beginners as well as "ex-

perts." With its complete equipment and free instruction to active members, the club gives more in return for the small dues paid than does any other similar club in the United States. Recent demonstrations have included: "The Producing of Soft Gray Tones and Platinum Effects on Bromide Papers," by H. T. Biclowski; "The Principles of Flashlight Photography in Relation to Artistic Work,"

CAMERA CRAFT

with the making of portraits and groups with the Smith Flash Machine, by E. W. Binkley. Classes in bromide enlarging are being formed, with Charles A. Mauser as instructor. Dr. H. D'Arcy Power will, on Tuesday evening, March twenty-fifth, give a talk on the "Dichrome Process Applied to Two-Toned Bromides," including the principles of dichrome coloring, technique and actual making of a two-toned bromide.

About thirty-two members attended an outing to Rock Spring on March second, most of the party walking from Mill Valley across the side of Mount Tamalpais to West Point and thence beyond to the rendezvous. Many views and groups were taken, and much hot coffee was consumed. The walk there and back did not exceed ten and one half miles but many of the hikers insist that full fifteen miles were indicated by their fatigued pedal extremities. The next club outing is scheduled for Sunday, March sixteenth. The Outing Committee will take the members and friends to the Blossom Festival at Los Gatos and Saratoga. A special trolley trip from Palo Alto will be an enjoyable feature. As Santa Clara County has more fruit trees than any other in the State, the wealth of blossoms will all but bewilder the participants.

Monthly illustrated lectures are given, as usual, at a large hall. This has been a regular feature of the club for over twenty two years. Admission is by invitation.

The annual election of officers will occur in April.

Announcement

The Capital Camera Club, of Washington, D. C., in announcing the Twenty-first Annual Exhibition, gratefully acknowledges the support given the previous exhibitions, resulting in placing these annual events among the most conspicuous exhibitions of the year. In asking your support for the coming exhibition, the committee in charge is determined to make the Twenty-first Annual one which will long be remembered as the best yet assembled, and to this end asks your hearty co-operation.

The rules, abridged, are as follows: All pictures submitted, as well as negatives from which made, must be the work of exhibitor. Only framed pictures will be exhibited, and all frames must be plain. The title of each picture and the exhibitor's name and address

must be plainly written or printed on the labels furnished by the committee. Pictures not legibly inscribed cannot be accepted. Lettering on the face of the print or mount is prohibited. Pictures must be delivered at the rooms of the Capital Camera Club, 1010 F Street N. W., Washington, D. C., not later than 9 p. m., April twelfth, 1913.

For additional information address W. C. Babcock, Chairman of the Exhibition Committee, at address as above.

Wilkes-Barre Camera Club

The Twelfth Annual Exhibition of the Wilkes-Barre Camera Club, held February seventeenth to twenty-second, added another success to the list of exhibitions held by that progressive organization. A departure was made in dividing the work into two parts, the Salon, confined to thirty pictures selected from the whole, and the remainder from which the Salon selection was made. Some twenty-eight contributors are responsible for the two hundred and thirty-six prints accepted and hung. W. H. Porterfield, although exhibiting but ten prints, secured four out of the ten certificates awarded and three others of his were given Salon honors. L. M. A. Roy had four out of his six in the Salon, one securing a certificate. John F. Jones, R. S. Kaufman, H. C. Shepherd and W. H. Evans, all made very fine showings, securing generous shares of the honors. Much credit is due C. Yarnall Abbott, who acted as judge, for the satisfactory manner in which the programme was arranged and carried out.

Photo-Secession Exhibitions

An exhibition of water-colors, New York, Berkshire and Adirondack series, and oils by John Marin, of New York, was held at the gallery of the Photo-Secession, 291 Fifth Avenue, between Thirtieth and Thirty-first Streets, New York, opening on January twentieth and closing February fifteenth. An exhibition of photographs by Alfred Stieglitz, of New York, was held at the same gallery, opening on February twenty-fourth and closing March fifteenth. The gallery being open from ten a. m. until six p. m. daily, Sundays excepted. The next exhibition will be devoted to caricatures, in monochrome and color, by Marius De Zayas, of New York.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported by William Wolff

A. G. Reynolds of the Glendenon Photo Company, Coalinga, has added a Seavey French Window to his studio accessories.

Mr. Lindroth, who bought the Mayo Studio at Modesto, is very well pleased with his purchase.

Mr. Carruthers, formerly of San Jose, is now located in Merced.

J. A. G. Brown of Fresno has been kept very busy all during the dull months.

L. M. Powell of Hanford is making some fine sittings with his Seavey Window.

Mrs. J. N. Boyd succeeds Mr. Boyd at Hanford, Mr. Boyd opening a studio at Lenore.

Dorman Brothers, C. F. and C. P., have bought the Myrt Studio at Bakersfield. C. F. Dorman formerly owned the place with J. B. James, who also has a studio in Bakersfield. Here's success to the boys.

J. B. James of Bakersfield has put a new tiled floor in his reception room. He now has one of the best studios in the Valley. James must be a "progressive."

Your correspondent is just leaving for his regular spring trip through the Pacific Northwest and will report any news picked up thereon.

That Special Offer

The American Photographic Text Book Company advises that there are still a few remaining sets on hand that are included in the special offer made in their advertisement last month, and it will be necessary for those desiring to take advantage thereof to send at once. The Library of Amateur Photography is a set of four books that should be on the shelves of every amateur photographer in the country, and the ten-volume set making up the Complete Self-Instructing Library of Practical Photography is an authoritative work that really needs no comment from us at this late day of its popularity. We have not at this moment received copy for their advertisement for this issue,

so that we can only advise our readers to write them at once concerning their advertisement in the March number, asking for particulars. The address is: The American Photographic Text Book Company, 350 Adams Avenue, Scranton, Pennsylvania

Two Fine Pictures

The two high speed photographs reproduced on this page are good examples of what can be accomplished by a skilled worker under difficult conditions, with a fine lens. The pictures were taken by Mr.



M. Robinson, of Philadelphia, at the Belmont Racing Track in that city. Both cars were driven ten miles in ten minutes and about sixteen seconds. The pictures were made with a series II Cooke anastigmat lens on a Graflex camera. The Cooke lens



was used with the diaphragm wide open, f-4.5, and the shutter was operated with one-eighth of an inch slit. On receipt of ten cents in stamps, the makers of the

Cooke lens, the Taylor-Hobson Company, 1133 Broadway, New York, will gladly send copies of these two remarkable pictures.

The Six-Fax Disc

We take pleasure in showing herewith a cut of the Six-Fax Exposure Disk, a recent invention which Burke & James, Inc., are



placing on the market. If one will examine it carefully we feel sure that he will agree that it is one of the simplest and most scientific exposure meter of this type ever invented. One will note that its calculation is based on the six facts which determine the correct exposure, namely: The speed of the plate or film in use, the size of the stop, the strength of the light, the character of the subject, the time of the day, and the time of the year.

Notwithstanding the number of facts which have been taken into consideration to obtain the readings, one will observe that with the dial set for the time of the day and year that a single turn of the disk gives the correct exposure for any outdoor subject for any size stop, whether expressed in the F or Uniform System. The correct exposure for all stops is shown simultaneously, which will often assist the user in selecting the stop best suited to the subject. Also note that the subject is read with calculation or reference to special tables as is the case with all reliable meter of this class. The disk sells for twenty-five cents and will be handled by all dealers.

New Luxo Factory

The increasing demand for Luxo Flash Powder, particularly since the introduction of the new formula which makes it even more rapid, brilliant and penetrating, with much less smoke than the former excellent production, has necessitated the erection of a new factory which will consist of two buildings now in course of erection at West Point,

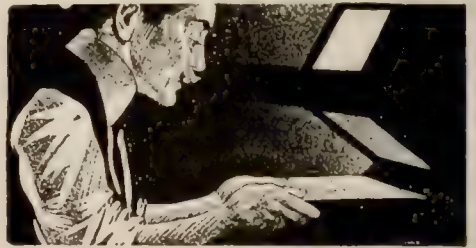
Pennsylvania. Insurance rates and restrictions in Philadelphia made it advisable to secure a new location, and dealers and others interested should note the change in address. The increased efficiency of the Luxo Powder has been achieved by increasing the actinic value of the light by means of a more correct and scientific combination of the chemicals entering into its composition. Two or three well-known flashlight workers of our acquaintance have been favored with samples for trial and their praise of the new powder is most sincere and flattering.

Enlarged Quarters

Owing to extensive policies, increasing business, etc., Sweeley's Photo Supply Company of Renovo, Pennsylvania, have found it necessary to remove from their present location to one over twice as large. On April first they took possession of the ground floor and basement in the four-story building owned by the Hopkins Estate, Erie Avenue, between Fifth and Sixth Streets. The new premises combine a floor space of seven thousand square feet, thus giving this firm adequate additional space to take care of their ever increasing business.

A New "Agfa" Booklet

Herewith is reproduced the cover of a new booklet just issued by the "Agfa" people.



The
"Agfa"
Way

It contains much valuable information and as they send it free upon request, a copy should be asked for at once before the

NOTES AND COMMENT

supply is exhausted. It is certainly worth many times the post card and slight trouble necessary to word the request. Ask for "Booklet 30," and address the card, Berlin Aniline Works, 213 Water Street, New York, N. Y.

Those Thin Films

Every amateur gets lots of underdeveloped, thin negatives. The ones you value most often come out the thinnest. Do not destroy them, as they can be built up to proper printing density by Victor Intensifier. It is simple to use and inexpensive. Get a tube from your dealer and try it on some of your thin films.

The Amplification of Kodak Methods

Just about the time that we begin to think that the simplification of the photographic manipulation has reached its highest point, the Kodak Company comes forward with a new and unlooked-for apparatus or process whereby the work is still further simplified or the pleasure to be derived therefrom is augmented. In the case of their most recent introduction, the Kodiopticon, both of these desirable points have been achieved. The popularity of the small camera has led to a full appreciation of the value of the small sharp negatives for the making of lantern slides therefrom over the difficulty that attended the production of lantern slides from the large negatives that were usually employed for ordinary landscape and other scenes some years ago. While many have availed themselves of the pleasure to be derived from the making and showing of lantern slides, the average kodak user has denied himself this pleasure through a lack of appreciation of the simplicity of the matter. With the Kodiopticon the amateur has a simple, safe and inexpensive method of projecting lantern slides for home entertainment, and with the new Velox lantern slide films, the making of lantern slides becomes as simple and easy a process as the making of Velox prints. These films can be used in any light that is safe for Velox paper and they are printed by contact under the negative in exactly the same way, except that the exposure is about one-half that required for Special Velox, the film being developed for three minutes in the regular Velox developer, fixing and washing being exactly the same. The result is a clean, crisp positive which simply requires being placed in a Velox lantern slide

frame with the proper mask in order to produce a perfect lantern slide ready for the Kodiopticon. The whole thing is so simple and easy that it seems surprising that it has not been done long ago, particularly as it removes all the disadvantages of working in a dimly lighted dark room and the further disadvantage of brittleness and weight that characterizes the usual glass plate lantern slide. Descriptive circulars can be obtained from all kodak dealers and many of them are in a position to show one of these interesting film slides. Of course, these circulars can be obtained direct from the Eastman Kodak Company, Rochester, New York.

Flashlights at Home

One of the most interesting fields for amateur work lies in the home. The light problem is solved by Actino Cartridges, which are most convenient in form, produce a strong illumination, yet give little smoke or report. Your dealer has them, or will be glad to get them for you.

The Bissell Colleges

We have just received a call for a photographer to accompany the Crocker Arctic Expedition on a two years' exploration trip to the unknown portions of the Arctic seas. Such a trip would no doubt be a novel and interesting experience.

One of the members of the March class, Charles H. Storm, has just returned from a seven years' sojourn in the Philippines, and will return to that country after finishing the course in commercial photography.

Those Foreign Cameras

A paragraph in the December issue, under the above caption, concluded with the suggestion that a still larger line of foreign-made cameras would be made available in this country, as dealers here felt that there was a demand. The excellent line of Ica Cameras, advertised in our last issue, and again in this, is an example in point. In this line is embodied practically all of the features that make these foreign cameras appeal to those of us who find them described as temptingly in foreign lists. A few German-made cameras have long been obtainable in this country, but the fact has not heretofore been advertised sufficiently to discover the extent of the real demand that might exist for them. These cameras of German manufacture are characterized by excellent workmanship, good

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material, and adaptability to a wide range of work. Our readers should accept the opportunity offered for familiarizing themselves with the different models making up the Ica line of cameras, and do so with every confidence that they are acquainting themselves with one of the very best lines offered us by that land of good lenses and cameras.

A New Pocket Camera

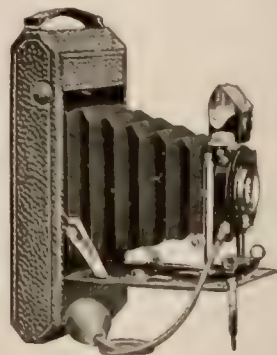
Burke & James have just placed on the market their No. 0 Folding Ingento, a roll film pocket camera making pictures $2\frac{1}{4} \times 3\frac{1}{4}$. This is the first of a complete line of film cameras which they will place on the market this year. This new camera is constructed entirely of metal, the body is covered with genuine leather, levant grain, the metal parts are nickel-plated brass, and the bed and back are of aluminum. The front is automatically extended, and is self-clamping. It is fitted with a fixed focus achromatic lens of high quality, speed U. S. 8. Later models will be equipped with a double rapid rectilinear and anastigmat lenses, provided with an ingenious focusing device. The shutter is automatic, and gives time, bulb and instantaneous exposures. Two tripod sockets and a dust-proof, brilliant, reversible finder are provided for taking either vertical or horizontal pictures.

The spool chambers are provided with regulation spool centers and an improved tension spring, insuring the perfect alignment of the film, and prevents fogging, owing to the paper becoming loosened. The camera measures $1\frac{1}{4} \times 3 \times 6\frac{1}{4}$, and can be carried conveniently in the hip or coat pocket, or in a lady's hand bag. The picture is plenty large enough for practical purposes, and so sharp are the negatives obtained that enlargements from four to eight times the original can be made. Being constructed entirely of metal, the camera is very strong and rigid. It is beautifully finished throughout. The price is \$10.00, and it will soon be on sale at all photographic supply dealers.

New Seneca Catalogue

The Seneca catalogue for 1913 has just reached us. It is a well-arranged and handsomely executed book, setting forth in detail the merits of the Seneca line. While it is evident that many small improvements tending to greater ease of operation—better results in negatives—have been made in the whole line, nevertheless the most noteworthy

advances are to be observed in the famous Senco Roll Film Cameras. These cameras, accommodating spool or roll film of any standard manufacture, were introduced to the photographic public just a year ago and received a most cordial reception. These in-



struments are now made in all the recognized sizes and are among the lightest, easiest working of the distinctly amateur cameras on the market.

The accompanying illustration gives a good idea of their trim and natty appearance. Made entirely of aluminum, it is, unlike some older styles of roll film cameras, in one piece and self-contained. The early claim made that it was easier to load and faster to operate has been well substantiated. There are no exposed hinges and the camera is absolutely light tight



The Scout Camera, which is the papoose of the famous Seneca series, is worthy of mention. It is constructed entirely of wood and metal and has features not possessed by and other box style roll film camera. It is light and the method of loading and unloading certainly deserves praise. This dainty camera must be seen to be appreciated. It is fitted with admirable lenses and shutters, and the front, a new design, has a very positive rack and pinion for the rise and fall.

NOTES AND COMMENT

Many of the other models are worthy of detailed notice did space permit, but the new catalogue is free to the readers of this magazine by simply mentioning this fact and addressing Seneca Camera Manufacturing Company, Rochester, New York.

The New Multi-Speed Factory

The Multi-Speed Shutter Company of New York take great pride in announcing the



completion of their new plant located at Morris Park, L. I. This plant will be devoted exclusively to the production of photographic goods of the finest quality and precision. Their new Multi-Speed shutters, their Precision camera and the new Multi-Speed Anastigmats, represent quality far in advance of other similar goods now on the American market. They also announce for early distribution a splendid motion picture camera for amateur use. It will well repay those inclined to "better photography" to send for a copy of their complete catalogue, addressing Multi-Speed Shutter Company, 317 East Thirty-fourth Street, New York.

Flashlights Without Smoke

Many profitable fields of work are closed to the average photographer because he is not equipped to make flashlights without smoke. Those photographers who possess flash bags find them a very profitable investment. Can you afford to be without them? Write for descriptive circulars of the Victor Portable advertised in these pages. It is light in weight, of ample size, and can be easily and quickly set up and taken down.

An Important Announcement

Our readers should all look up the two-page announcement of the American Photographic Text Book Company which appears in the front of this issue. This firm has been advertising with us for a number of years and we believe our readers need no assurance from us as to standing and the reputa-

tion which it bears for careful and courteous treatment of its customers, those who have purchased one of its instructive and informative sets of practical photographic books. This new branch of their activity that comprises the supplying of both photographic material, technical advice and other services should be of value to all, and the facilities which they are placing at the disposal of the amateur and professional photographers should be investigated and advantage taken thereof. They have just gotten out a handsome catalogue that should be sent for at once. Write today for a copy of the book before the matter is forgotten. Address the American Photographic Text Book Company, 350 Adams Avenue, Scranton, Pennsylvania.

The Nichols Flash Bag

The Charles H. Nichols Company announce that, after years of experimenting, they have a flash bag ready for the market, one which can be adjusted, or rather attached to any Nichols Portrait flash lamp. This last is a point that has seemed very desirable, as it was desirable to avoid the necessity of present users having to discard their old lamps



Rear View of Flash Bag Showing Position of Lamp and Bag Support.

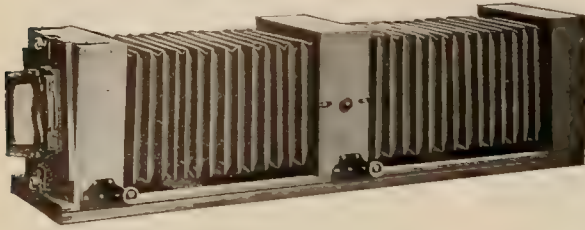
that were giving them such excellent service. The flash bag in question is extremely simple and practical; it weighs but five pounds,

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folds into a small space, and can be set up and attached to lamp in less than two minutes. This new flash bag and the well-known Nichols lamp forms a combination that should appeal very strongly to flashlight workers. Particulars of both will be gladly sent by the Charles H. Nichols Company, 1317 Euclid Avenue, St. Louis, Missouri.

A Lantern Slide Camera

The Century Camera Division of the Eastman Kodak Company has placed on the



market a camera that will unquestionably prove popular among amateur and professional photographers, who have occasion to make lantern slides. This instrument is called the Century Lantern Slide Camera, and is constructed along the lines of the larger and more expensive enlarging, reducing and copying cameras. It has a bellows draw of 36 inches and removable lens board in the center compartment. The back is fitted with lantern slide attachment, with rising, sliding and oscillating adjustments. The front includes set of nested kits, ranging in size from 5x7, the capacity of the camera, down to 3¼x4¼.

The price of this camera complete is twenty-five dollars. For those who wish to enlarge to 5x7 by making positives or bromide enlargements, an extra 5x7 back is furnished. This back with one Century View Plate Holder lists at six dollars extra. No lens is included in the above price, but any lens of suitable focal length will produce satisfactory results.

A Special Offer

Our readers' special attention is called to the exceptional offer made in our advertising section by the Photo Products Company, Department E, 6100 La Salle Street, Chicago. This demonstration package they propose to place in your hands for only twenty-five cents, hardly more than the cost of postage; surely a liberal offer and showing

what unlimited confidence they have of their paper making good. This company does a very extensive business with the professional photographer, but it is only recently that they have commenced to cultivate the amateur trade. This change in policy is doubtless due to the fact that it is now possible to send smaller shipments by parcel post more conveniently and cheaply than when it was necessary to send by express.

The cost of transportation is quite an important item, as all shipments made by this company are prepaid, and the express on smaller orders such as the amateur would necessarily place, as compared with the professional, has been too high to make this business so desirable. The Photo Products Com-

pany sell practically all their products direct to the user and claim it is due to this that they are able to make lower prices than others without losing sight of quality. Instanto is not a new paper, but has been in use for a number of years. A large number of professional photographers use it in their amateur finishing work, and commercial men whose requirements are most severe use it extensively.

The special offer they are making is to send three sample dozens of Instanto paper in any grades or size you select, 4x6 or under, and you may choose postal cards if you prefer. We are certain that a large number of our readers will seize this opportunity of trying Instanto and are sure they will be agreeably surprised.

Newspaper Artist Expires

Edgar W. Smallwood, a staff photographer of the *Daily News* for the last eight years and before that connected with other Chicago newspapers, died Tuesday, February eighteenth, at his home, 3513 South Francisco Avenue, after a lingering illness. Dropsy was the cause of death. He leaves a widow and a daughter. Mr. Smallwood was taken ill on November twenty-fourth last, and his illness almost immediately took a dangerous turn. He was a graduate of the College of Physicians and Surgeons. Mr. Smallwood was well known to newspaper men of Chicago and his camera had illustrated some of the biggest newspaper "stories" of recent years.—*Daily (Chicago) News*.

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

An Advertising Suggestion

By H. C. Whipple

"The aim of an advertisement should be to point out to the people how to fully meet their wants so that every one may be satisfied. For my holiday work I confined myself entirely to

C Y K O

Not a cog slipped in the printing room. Prints always came out just as anticipated, and satisfactory in every way. The uniform speed and quality of CYKO removes all guesswork and anxiety from the printer's mind. The *uniformity of speed* is a feature that appeals to me very strongly, and I believe is a good point for you to put forward in advertising."

AnSCO Company

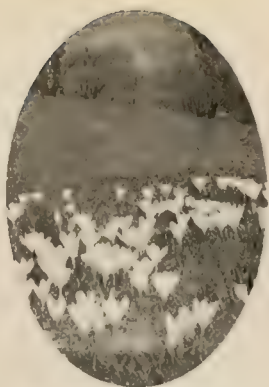
Binghamton, N. Y.



A CALIFORNIA HOME
By WILLIAM HOOD

CAMERA

CRAFT



A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

VOL. XX

MAY, 1913

No. 5

Ray Screens Used in Multiple

By William Hood



With Illustrations by the Author

EDITOR'S NOTE—Several local workers have been experimenting with what they are pleased to call "The Hood Method." Their enthusiastic praises make it gratifying to us to be able to report, from Mr. Hood's own pen, the following direct statement of facts as he has found them. Mr. Hood has no desire to enter into any discussion of the theory on which his procedure is based; and it was only at our urgent appeal that he consented to furnish the few examples reproduced herewith.

Ray screens or filters, commonly used with orthochromatic plates and films for compensating the effects of harsh lighting contrasts, and for causing panchromatic plates to render true color values, can be used of greater densities than commonly manufactured, to great advantage in some kinds of photography, particularly landscape work.

For instance, the Goerz ray screens or filters, of the reddish yellow type, are ordinarily made of three general densities, light, medium, dark, and advertised by the makers to require increased exposures, respectively, of about five, ten, twenty times, or other series of times the exposure suitable without the ray screens.

Other well-known makes of ray screens or filters are considered to require different increases of exposure.

In cases where a more dense ray screen than is on the market is needed, it can be accomplished by putting on two screens, one on the back and one on the front of the lens; and, so used, their rating for increased exposures is in multiples, and not in sums.

For instance, a four times and an eight times filter so used become about a thirty-two times filter.

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Two sixteen times filters so used become about a two hundred and fifty-six times filter.

Two sixteen times filters can be cemented together and mounted in one ring and then act as about a two hundred and fifty-six times filter.

This double sixteen times filter can be put on the front of the lens and, for instance, a sixteen times filter put on the back of the lens, or vice versa, and together act as about a four thousand and ninety-six times filter, holding back the ultra violet and related rays; also facilitating the passage of other rays of light.

There are important uses for these dense filters.

There is no difficulty in focusing through these dense multiple filters, for the reason that all objects, excepting those in which blue or related colors predominate, are brightly seen.

These multiple ray screens used with panchromatic plates, even unbacked plates, enable results to be obtained analogous to those intended to be obtained on the Hydra and Panchromatic Hydra plates of the Paget Prize Plate Company, including practical immunity from over-exposure and freedom from halation, even to the extent of enabling a picture to be taken of an interior, including large windows with bright sunshine coming through them, and including good delineations of the outside landscape seen through the windows.

The action of these multiple ray screens is the reverse of what might be expected, in some important particulars.

For instance, if an exposure has been properly decided on, with a one hundred and twenty-eight times ray screen, to include a shaded porch, with



THIRTY-TWO TIMES FILTER (8x4); STOP F-45; CRAMER SPECTRUM PLATE. EXPOSURE TWO MINUTES THIRTY-TWO SECONDS

RAY SCREENS USED IN MULTIPLE



SEVENTY-SIX TIMES FILTER (17x4½); STOP F-45; CRAMER SPECTRUM PLATE; EXPOSURE TWO MINUTES THIRTY-TWO SECONDS

wooded mountain landscape seen through the arches of the porch, and it is decided to considerably increase the exposure in the dark portions of the fore-



TWO HUNDRED AND TEN TIMES FILTER (15x14); STOP F-45; CRAMER SPECTRUM PLATE; EXPOSURE TWO MINUTES THIRTY-TWO SECONDS

CAMERA CRAFT



TWO HUNDRED AND TEN TIMES FILTER (15811); STOP F-15; WRATTEN PANCHROMATIC EXPOSURE PLATE; ONE MINUTE TEN SECONDS

ground and slightly decrease it for the mountains, it can be done on a panchromatic plate by substituting a higher multiple ray screen; for instance, a two hundred and fifty-six times screen for the one hundred and twenty-eight times screen, using exactly the same time of exposure and diaphragm diameter.

The results can be farther modified in the way of softening direct sunshine, etc., etc., or the reverse, by slight decreases or increases of actual time of exposure.

Duration of exposure for a studio subject, determined for panchromatic plate and light ray screen, can be reduced by using a multiple ray screen of greater density, where no important area of the subject is blue or a closely related color.

Panchromatic plates of different makes vary slightly when used with these multiple screens, particularly in the effect on the highlights, and require slightly varied treatment.

Similar results can be obtained with any partially color-corrected plate or film up to the limit of their color corrections.

The use of panchromatic plates and multiple ray screens, as described, in effect controls the lighting and enables the photographer to render satisfactorily subjects of extreme difficulty.

One example will serve to illustrate the method of use of panchromatic plates and multiple screens in combined semi-interior and landscape work.

Subject, veranda; all interior detail desired by owner.

Adjacent garden and grass plots and ornamental trees: complete detail desired.

RAY SCREENS USED IN MULTIPLE

Distance, wooded hills; outline of spurs and ridges and the nearer trees to be clear; sun sixty degrees to one side of the line of sight and shining strongly through openings of veranda upon its floor, chairs, etc.

With Wynne actinometer.

Plate speed U. S. 576.

Correct exposure with plate speed stop for the wooded hills, one and one-half seconds.

Correct exposure, with plate speed stop for the darkest detail to be shown inside the veranda, five minutes and fifteen seconds, being three hundred and fifteen seconds, which is two hundred and ten times one and one-half seconds.

Use two hundred and ten times filter applied to the one and one-half seconds wooded hill exposure, which gives correct exposure for U. S. 576 stop as three hundred and fifteen-seconds.

If actual exposure is to be made with, for instance, U. S. 64 stop, the exposure time would then be thirty-five seconds, modified slightly, as usual, for the focal length used versus the equivalent focus.

The resulting plate will be ideal for the part of the veranda where the actinometer time was five minutes and fifteen seconds, and for all other parts of the view.

If it should be desired to include some still darker detail inside the veranda, use the same exposure and a more dense multiple filter, two hundred and fifty-six times for instance, which will slightly reduce the density of the part of the plate showing the wooded hills, with slight increase of their detail.

If exactly the multiple filter that ought to be used is not at hand, the nearest available will give essentially the same plate, using by preference a more dense rather than a lighter multiple filter or ray screen.

Analogous methods for various classes of subjects can readily be worked out, and experience with the different makes of panchromtaic plates will give the best way to expose each sort as to extreme contrasts, etc.



Elimination of Non-Essentials

By A. T. De Rome



With Illustrations by the Author



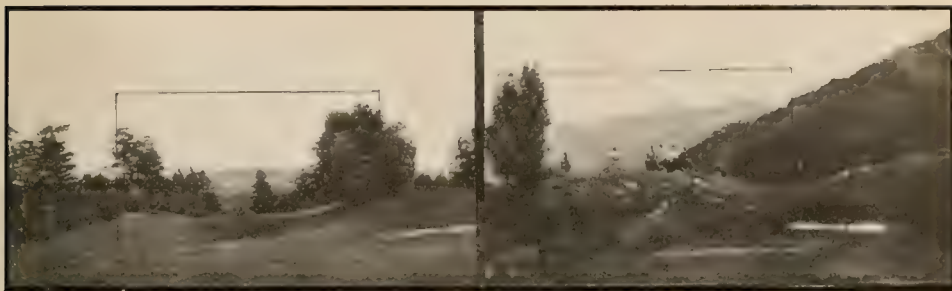
THE AUTHOR AT WORK

First carefully studying the selected subject material through a rectangular aperture in a piece of cardboard or metal, as suggested in the preceding article, making sure there is complete harmony between our place, subject and thought to be expressed or conveyed, one should next try to eliminate, as far as possible, all such features as do not have a direct part to play in the telling of the story, the same as if one were staging a play. Everything included should help to support and strengthen the theme. The things to eliminate are those that, when removed, are not missed; or, in other words, those that do not leave a link out of the chain of thought one is endeavoring to express pictorially.

The greatest pictures, one will find, are really poverty stricken when it comes to the minute delineation of detail. One will find that the artist has

included only the essentials, and the photographic artist should do the same. For example: In telling a story of labor and industry, he does not need to show a great mass of machinery in all its detail, with hundreds of human beings sweating and striving. A few grouped smokestacks belching forth clouds of black smoke will, artistically rendered, tell the story in a more interesting way, because the imagination of the one viewing the picture is given an opportunity to fill in the story scene, supplying details familiar to his individual experience. And nothing will move a person deeper than the setting up of a mental reaction involving some former experience of his mind. This is why silhouettes are so interesting. However, not every thought can be fully expressed in so simple a manner. Where detail is the chief characteristic, detail must be shown. Experience and a careful analyzation of each subject are one's best and only guides.

ELIMINATION OF NON-ESSENTIALS

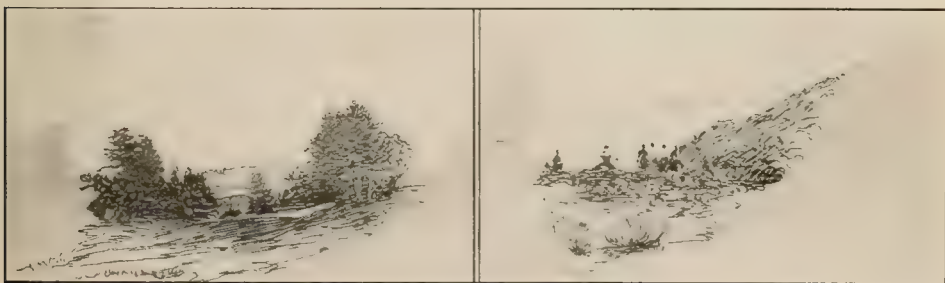


Observe how large a portion of these two prints are non-essential. By using those parts inclosed within the black lines, the poetical is separated from the historical, none is left to the imagination, and the story is told with more directness and force. The right-hand example illustrates the principle of so placing figures that they are in harmony with the thought and place.

To impress this upon the reader's mind in a practical way, I would suggest that he take any of his prints, fill in solid with Higgins' black waterproof or similar ink only the parts he knows to be absolutely essential, and then bleach out the photographic image of the print with Farmer's reducer. This solution is made by adding enough red prussiate of potash solution to a one-in-twenty hypo bath to make the latter a pale straw color. Or, one can make the print on common blue print paper such as architects use, and bleach with lye. Either experiment will give one a practical demonstration that will confirm me and make clear my meaning. One cannot make these drawings too often; each time one will discover something new of his own accord. In order to show what can be done along this line, I have taken a couple of ordinary prints and converted portions of them into interesting little sketches by simply inking them in and afterwards bleaching out the photographic image as advised.

By making like drawing over one's print with Higgins' brown or sepia ink, prints that would ordinarily be thrown in the waste basket can be turned into dainty little sketches, which, when framed with a broad mat, can only be distinguished from original etchings by an expert. One can, therefore, as the saying goes, "kill two birds with one stone"; that is, train oneself to recognize the non-essentials and, at the same time, produce creditable sketches to confuse the friends who are quite sure he cannot draw a stroke.

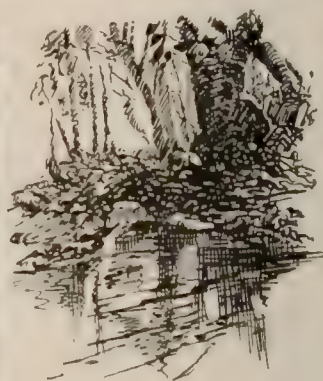
There are many ways of getting rid of undesirable details or detracting portions of a subject; the most common method being to include it in some



These examples show how prints that do no more than record the topography of particular spots can be turned to good advantage by inking in the desired portion and then bleaching out the photographic image.

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broad shadow tone, or if a disquieting line, to bring it close to some more important one or some of like tone and allow it to be absorbed or hidden thereby. But to introduce a discordant element admits of no excuse. As I write there comes to mind a picture I saw not long ago, one made by a serious worker, in which a lady was posed before a dressing table, holding a mirror at arm's length and apparently admiring her reflection therein. The picture was taken indoors; that much being all right, but a bunch of eucalyptus leaves had been hung from above to give the impression that the subject was out of doors. The result was a story too ambiguous and disquieting, despite the beautiful qualities of the print, to thoroughly please the person beholding it. How often do we see, posed among brambles by the babbling brook or precariously perched on a cold, slippery boulder, a nude figure, either about to fall into the water or else frozen in an inane posture. No matter how fine the negative or how well the print may be finished, the beholder can only feel sorry for the subject; and this, simply because details have been allowed to suggest other than the story intended



This picture shows the commonplace result secured when two points of interest are included. By dividing this into two pictures, marked 1 and 2, each with its own point of interest, the same story is told in a more direct and pleasing manner. Enlargements from either of these two selected portions would show more atmosphere than has been secured in this contact print. Observe how unessential are the portions lying outside the two rectangles. The drawing at the right is a print that has been inked in and bleached out as advised.

to be expressed by the photographer. On the other hand, by giving the figure or figures a natural pose on the grassy bank, with appropriate atmospheric conditions or surroundings, and proper printing, only tends to increase one's satisfaction with the suggestion conveyed. I would suggest, however, that the photographer leave subjects of this nature to the painter, so many considerations being involved that success is only achieved after long training. And further, observation has forced upon me the conclusion that too often the production of these pictures is inspired by other than those thoughts and motives guiding the serious worker.

When one has produced a print characterized by a mass of detail, he has only accomplished the historical; and this, not being suggestive, will always be found to be more or less uninteresting, because uninspiring. On the other hand, if he selects and uses only the picturesque, he not only exhibits artistic judgment, but he causes the exercise of artistic judgment in others. Just as he displays and stimulates his own reasoning powers, so he will inspire that of his



FIRST STEPS

By MRS. W. W. PIERCE

CAMERA CRAFT

auditors. Still, while aiming to exalt the poetic principle, one must not underestimate the importance of detail, for the value of all our work depends upon the judicious balance of these apparently conflicting tendencies in the finished picture. An expression, a portrayal of the subject's character, not a rendition of its every detail, is what one should strive for. Nowhere is this so well demonstrated as in the caricature, a class of work wherein only the character, not the actual form, is drawn by the artist. I do not by any means advise that one should turn his picture into caricatures, but the lesson that they teach, the principle they emphasize, is valuable; and, if applied to one's work, will set him several steps ahead.

Having determined the point of greatest interest in the subject and having eliminated the non-essentials as far as possible, one should next attempt to concentrate the strongest light, or bring the strongest contrast of light and dark, upon that part. The point of greatest interest should be the part to first claim the eye. To properly accent this point in a picture, a dark spot can be used with just as telling an effect as a light one. The most telling contrast in a picture, the point where light and dark are made to emphasize each other, will always command first attention. If this contrast be at the desired point, at the point of principal interest, everything else must be made subservient to it, the rest of the picture gradually blending off through the scale from light to dark or from dark to light. For example, in viewing a sunset on the bay, one would first be attracted by the brilliancy of the sky or clouds, then the bright reflection in the water, then the lights on the shipping; and, on looking longer, one would find sea-gulls, distant shore objects and hundreds of other details, all hidden in the broad shadow. Or, for another example, take an interior with mother sewing. The best light should be on the sewing and on the hands, because these are the things that the picture is to talk about. The next strongest light should be on the face, gradually weakening in tone on the chair, table, floor and the rest as these parts decrease in importance. On the other hand, if the object be to attract the greater amount of attention to the personality of the subject, making that the theme, one should put the strongest light on the face, the next strongest on the hands and work, then on the chair, table, and the rest, as before, taking care to render the whole in broad, soft, warm tones, thereby bringing the subject, the place and the thought into harmony with each other.

Contrast suggests action; soft, broad tones, mildness. To best convey the thought of a storm, one places the darkest spot against the lightest, a black wreck against a streak of light in the overcast sky, an impression of motion, black rocks against the light of dashing spray. A delicate, feminine figure contrasted with that of a Hercules intensifies the idea of strength. Going to the other extreme, a broad, quiet expanse of ocean, broken only by gentle, lapping waves, with the light well diffused by drifting mists, suggests only peace and calm. The strong contrasts thrill, while the quieter harmonies tend to soothe. When a violent effect is wanted, the darkest spot should be placed against the lightest. So arranged, the maximum concentration of interest is secured; and, as these two extremes are separated or subdued, the strength of the picture will be found to decrease. This rule holds good throughout the entire list of

ELIMINATION OF NON-ESSENTIALS

subjects, from storm and shipwreck to misty moonrises, from athletic contest to fuzzy portraits.

Few photographers are aware of the influence and additional power of suggestion to be obtained through an understanding and application of the influence the shape of the print can have upon the mind. The two extremes, the narrow upright and the long, horizontal panel, will serve as examples. In the first instance, the very outline, still innocent of a picture, suggests tall, graceful trees, towering buildings, even willowy figures. As the square is approached, the shape is more in harmony with subjects having the character of sturdy oaks, solid buildings and stout people. Passing on to the horizontal panel, the form is suggestive of restful subjects, those having horizontal movement. Rolling hills, spreading marshes, quiet seas, all such are suggested. The reason for this is both an optical and a psychological one. In any pictorial arrangement the eye follows the line of least resistance; that is, those lines having the least number of breaks or curves. The eye and mind, through habit, are continually searching out those thoughts that are continuous, resenting interruptions. If the interruptions be too frequent, the mind gives up, unconsciously perhaps, its search for information, the observer loses interest. With the upright panel form of picture, the eye, in following the lines of greatest length, those that are upright, oscillates in a perpendicular direction. The brain recognizing, through previous experiences, this motion as being one associated with height, transmutes to the mind, the understanding, an impression of height.

This does not mean that the shape is the main consideration. Everything should rest within the boundaries of the picture space, the subject governing the shape, not the shape governing the subject. Mural decoration, of course, being an exception in that its spaces are governed by architectural conditions. One should make the shape of his picture fit the subject, not the subject fit the set boundaries of the stock sizes of plate or film. High trees, for example, with the action all upward, require an upright panel. Long, rolling hills require a horizontal picture space. One cannot change the shape of his plate, but he need not be afraid to trim his prints. It is far better to have a square inch of real beauty than an acre of bewildering jumble. The relative proportion of each part of a picture to each other part, together with this question of shape, is a matter that will, later on, be dealt with under the heading of mass and again under that of composition and balance.

You ask why I write all this when you know it; of course you know it, even instinctively; but do you use this knowledge? It is not my intention to instruct, to point out a royal road heretofore unknown; but rather, to suggest how the reader can obtain the greatest possible amount of service from that which he already knows.

Reading books or watching other people will never do more than suggest the line along which one should work. It is by doing the actual work, by continually trying first one thing and then another, that the end is attained. There is no royal road to art, no easy path. The harder one works, the more he will enjoy the fruits of his labor.

As outlined, my next article will deal with the suggestive power of line,

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color, and texture. However, before worrying about what these new factors have to do with pictures, make sure that you thoroughly understand what has already been written. If any point is not clear, write me, care of CAMERA CRAFT, and I will gladly help you.

[NOTE: We would like to qualify this last rather rash offer by saying that it will be carried out as far as the author's time permits. Mr. DeRome's working day is not only taken up with the directing of the art work of what is perhaps the world's largest poster and painted display organization, but he also acts as advertising counselor to the heads of several of California's leading industries. Fortunately for our readers, Mr. DeRome finds his recreation in this giving to others that which he has secured through the working out of his problems.—THE EDITOR.]

I fully believe that it is possible to work both quickly and well when the spirit moves. In this respect painting resembles poetry. I admit that people say you would paint better if you painted in less haste, but though in this case you are probably right, it does not follow as a necessary conclusion; for it is equally true that a labored production, one that lacks conviction and is not finished with the same enthusiasm that marked its commencement, is equally bad.

—GEORGIO VASARI.



BUCKING SNOW ON THE FRISCO RAILWAY

By H. E. HIGH

My Experience As An Amateur

By Lettie M. Loomis, I. P. A. 1817X



With Illustrations by the Author



About eight years ago, my husband presented me with a No. 3 Eastman Folding Pocket Kodak. It made a picture $3\frac{1}{4} \times 4\frac{1}{2}$, had finger release for making the exposure and a slide with openings of three different sizes for stopping down the lens. It was the kind that retailed at that time for seventeen dollars and fifty cents. I was greatly delighted, having always loved pictures as well as the endless things that are

MY FIRST EXPOSURE—THE WHITE ELEPHANT

beautiful in nature. Now, I thought, I would have a chance to make permanent records of some of the little glimpses of beauty that I so loved. This Kodak seemed to me to be the realization of a dream. I had never before even held one in my hands, so I turned it about very carefully, studying the exterior closely, finally locating the concealed button that held it closed. This I pressed, and, "Oh, what a perfect beauty!" The dealer, I was told, had loaded it with a roll of film so that all I had to do was to pull the front to the right number of feet, locate the image in the finder, and then press the lever. So I went forth in search of something worthy of an exposure; but, finding myself endowed with such a wonderful power of recording beauty, my capability for finding it seems to have departed. A hard task confronted me and I became half afraid of that small Kodak and its peculiar effect. Finally I spied what is called the Big White Elephant, a very large oil tank that was built when the town was booming as a prospective oil center. It was well built, painted white, but had never contained a drop of oil, hence its name. I went quite a way up the hill on which it stands so as to be sure of getting it all in. I pointed the camera towards the tank, admired the beauty of the broad Pacific in the distance, and pressed the lever. That was my first beauty picture. After all of my high ideas in regard to beauty I had snapped an oil tank for my first picture.

Well, having no one to give me any assistance or advice, I made all the usual mistakes and a few that I flatter myself were unusual. I might have

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stumbled along in the same blind way for some time had not my husband brought home one evening a slip of paper and handed it to me, saying, "Here is what you want." The slip explained that one could obtain two magazines, CAMERA CRAFT, a first-class photographic magazine, and *Sunset Magazine*, both for the price of one. I at once took the slip across the street to our local editor and postmaster, and asked him to send in the order. The magazines came in good time, and I learned more picture making from that first number of CAMERA CRAFT than I had ever hoped to know, judging from my progress up to that time. I could hardly wait for the following issue, reading and rereading that number. I have all the issues since that first one, a complete file, and often refer to them. There is nothing like a good photographic magazine to help one over the hard places and make the work a greater pleasure through making the results more satisfactory. I made exposures by the wholesale, hiring the dealer to develop the film, but always doing my own printing. The old Solio paper gave me fine results, at least I thought so, and all my friends called me an expert; but, honestly, I have never yet taken a picture with which I cannot find some fault and feel sure I could do better were I to make it all over. Some day, perhaps, I will succeed in making a fine picture because I am just as enthusiastic as I was when I first used the camera. For three years I used my original Kodak, with a growing desire for something larger, so I sold it to a friend for fifteen dollars; and, putting ten more with it, bought a



"DON'T SCOLD ME FOR PICKING THEM"
—September, 10 a. m., foggy, f-8, one twenty-fifth second exposure, ordinary film.



"I'M SO GLAD YOU DON'T CARE"—September, 10 a. m., f-8, one twenty-fifth second exposure, ordinary film.

MY EXPERIENCE AS AN AMATEUR



MY MARGUERITE—January, 2:30 p. m., bright sun, f-16, one twenty-fifth second exposure, ordinary film.

BANANA TREE June, 1:30 p. m., bright sun, f-22, one twenty-fifth second exposure, ordinary film.



MARSHALL NEIL ROSE—January, 2 p. m., cloudy, f-16, one-fifth second exposure, ordinary film.

DUCHESS TREE ROSE—January, 1 p. m., sun, f-16, one twenty-fifth second exposure, ordinary film.



THE LARGEST GRAPE VINE IN THE WORLD—October, 2:30 p. m., cloudy but bright, f-16 one-fifth second exposure, ordinary film.

3A. I found that every film had to be matted, in printing post cards, the negatives lacking just a little in width. This took time, and my time was beginning to be valuable now that I was fairly sure of my exposures. Again I sold my camera, another friend being available; again applied an additional ten dollars, buying 4A, fitted a rapid rectilinear lens in an auto shutter. Now I thought I had an ideal camera, and indeed I took a lot of pictures with it. About this time I bought a tank and found it easy to develop my own films, doing it in the day and without a dark-room. I would advise every amateur to get a tank. I then applied for membership in the I. P. A., submitting some of my early work; and, would you believe it? Mr. Clute asked me to try to do a little better. I had neglected to tell him how all my friends had praised my work, thinking he would see its good quality himself. But I sent in some of my more recent work and it passed, making me I. P. A. 1817X. All those I. P. A. members were very nice to me, giving advice, supplying data with their pictures, and giving me their formulas when asked. Oh, I tell you, I learned almost as much from them as I did from my CAMERA CRAFT. From these two and my own sad experience, I really learned about as fast as one could reasonably expect.

In our vicinity there is a mammoth grape vine, said to be the largest in the world. The trunk measures nine feet nine inches in circumference, the branches cover one-fourth of an acre, and it yields ten tons of grapes annually. I wanted a picture of it to add to my collection, so I asked my husband to drive down that way, it being a fine, sunshiny day. Arriving, I made two exposures on that grand old vine with the sun shining brightly upon it, but when I devel-

MY EXPERIENCE AS AN AMATEUR

oped the negatives I experienced the greatest disappointment of my entire photographic career. Now, I was not so foolish as to be ignorant of the cause of my failure. Although no one told me, I knew at a glance that it was no time to take a picture of the largest grape vine in the world when the sun was shining strong upon it. So I waited patiently for a cloudy morning, again drove down, and this time secured a more satisfactory view. I tried everything that came along; purchased an Ideal Ray Filter and tried cloud photography.

Several times I sent pictures to Mr. Clute for criticism, always receiving kindly and helpful advice. Later he advised me to get a better lens than the rapid rectilinear I was using; so, after thinking it over, I decided to equip myself with an anastigmat. I found another friend to buy my 4A at a slight reduction on the price I had paid, so parted with it. There is nothing like having plenty of friends. Then, studying over lens and Kodak catalogs, I finally decided upon a 4A Speed Kodak fitted with a Zeiss anastigmat lens, focal plane shutter. This I found was not exactly what I wanted, as I do quite a lot of child portraiture and the focal plane shutter made a noise when released that permitted of only one exposure being made on an ordinary

child. It was fine for speed work, but as I did very little of that, I exchanged it for a 4A folding. This is fitted with a Zeiss Kodak lens in Compound Shutter and a direct vision finder. This, I think, makes an ideal outfit, at least for all-round work.

I have learned to pose children in a shady place; and with my lens working at f-6.3, a very short exposure, one of one-fiftieth or one-twenty-fifth of a second, is sufficient. I am sure I shall never regret having taken Mr. Clute's advice and purchased the anastigmat. I realize, further, that he was kind in not giving me the advice until I had learned something about the use of the camera I had. I read everything photographic that comes my way, taking three magazines of the craft. Recently I purchased a four-volume set of the Library of Amateur Photography and find it all they are claiming it to be. Of course, if I mastered everything contained in these books and in my files



MY JAPANESE CALLER — October, 4:30 p. m., bright sun, stop f-8, one-fifth second exposure, ordinary film.



A CALIFORNIA LANDSCAPE—June, 10:30 a. m., brilliant sun, f-16, one-fiftieth second exposure, ordinary film.

of the magazines, I would be a past master, but I am always learning and am just as much in love with the witchery of a Kodak as when I made my first exposure on the high, white oil tank, with the Pacific Ocean as a background.

The Imagination In Work

So long as the uses of the imagination in creative work are so little comprehended by the great majority of men, it can hardly be expected that its practical uses will be understood. There is a general, if somewhat vague, recognition of the force and beauty of its achievements as illustrated in the work of Dante, Raphael, Rembrandt and Wagner; but very few people perceive the play of this supreme architectural and structural faculty in the great works of engineering, or in the sublime guesses at truth which science sometimes makes when she comes to the end of the solid road of fact along which she has traveled. The scientist, the engineer, the constructive man in every department of work, uses the imagination quite as much as the artist; for the imagination is not a decorator and embellisher, as so many appear to think; it is a creator and instructor. Whenever work is done in great lines or life is lived in fields of constant fertility, the imagination is always the central and shaping power.—
HAMILTON WRIGHT MABIE.

Using Spoiled Prints and Plates

By "Wik"



With an Illustration by the Author

Spoiled gas-light prints and bromide enlargements, if thoroughly fixed and washed and then bleached free from the image, make most excellent paper or support on which to work the single transfer carbon process. The preparation of the paper is not at all difficult. The unsatisfactory prints should be fixed in acid hypo and then washed, using the same care as for good prints. Then, using a hard rubber, insulite or enameled tray, bleach out the image in:

Water 16 ounces

Potassium permanganate, saturated solution..... 1 ounce

Sulphuric acid, C. P..... 1 ounce

These should be stirred well together. This is about as strong as can be used with safety; a weaker solution is safer, but will work more slowly. This acid-permanganate bath gradually deteriorates after being combined for use, becoming inactive in from eight to ten minutes. When it changes from purple to a muddy plum color, it should be discarded and a new solution prepared. The permanganate can be kept made up in a saturated solution, as it alone will keep



WHERE THE INDIANS MAKE THEIR CAMP

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indefinitely. This makes the preparation of the bleaching solution a very simple matter.

Both black or sepia-toned prints will respond to the treatment. Sepia prints should be treated first while the acid-permanganate bath is strictly fresh, as they do not bleach as easily as black prints, sometimes refusing to bleach completely when the bath has been used a few minutes. After image is bleached out, place paper in acid hypo and move around until every trace of the permanganate solution is removed, finally washing well and placing to dry. It is best to swab the paper with a tuft of cotton, both in the permanganate and the hypo bath, to avoid sediment and air bells, as these, in the final drying, would come out as black spots.

The paper should be cut slightly larger, about one-eighth inch all around, than the size of carbon tissue intended to be used. Transfer and develop according to the printed instructions for the production of single transfer carbon prints.

It is to be supposed that almost any kind of bromide or gas-light paper would be suitable for single transfer carbon after being treated as above. The following brands were tried out and found all right, with exceptions as noted; and possibly these few deviations were due only to variation in the treatment such as are bound to occur in the making of prints from day to day. Velvet Velox, result excellent; Portrait Velox, good, but emulsion showed cracks on surface when bent; Royal Velox, good; Royal Bromide, good, but in one instance image partly came off after drying, due probably to some grease accidentally left on the surface of the paper; P. M. C. No. 2, very good; P. M. C. No. 8, excellent; P. M. C. No. 4, glossy, showed a few blisters in original emulsion of paper; Cyko Linen Surface, most excellent; and Platora, smooth



ST. JOE RIVER, IDAHO, LOOKING UP STREAM FROM CHANCELOTT

USING SPOILED PRINTS AND PLATES



STUDIES OF A ROSE, CRAMER ISOCHROMATIC PLATE

professional, very good. I have every reason to believe that the softer emulsions, such as bromide and Velox, could be used for double transfer, if treated with hot water before transferring in order to render the gelatine coating as soft as possible without melting, but so far experiments in this line have not been conducted conclusively.



ST. JOE RIVER, IDAHO, LOOKING DOWN STREAM FROM CHANCELOTT

Spoiled dry plates can be treated in the same way; and, used for the support in making transparencies or lantern slides by the carbon process, give excellent results. For this purpose, however, they will require an extra treatment in order to render the gelatine impervious to hot water. This consists of immersing them for two or three minutes in a weak solution, about two per cent, potassium bichromate, squeegeeing off surplus solution and drying in daylight. They are then ready for use. In transferring to glass as treated above, it is advisable to place the glass in hot water, about one hundred and twenty degrees Fahrenheit, for five minutes, replacing the hot water with cool for transferring the printed carbon tissue. The emulsion side of the glass is difficult to see, but can be determined by scratching along the edge with a pin, knife or the finger nail. Pay no attention to the deep yellow color of the glass; it will come out in the hot water when developing the transparency, or in the alum bath following development.

In using this acid-permanganate bleaching solution, it is advisable to wear rubber gloves or finger tips, as this combination is anything but beneficial to the hands. If the fingers should become stained with permanganate, washing in acid-hypo will remove it. Should any reader desire further information, I would be pleased to answer any letters addressed me care of CAMERA CRAFT, San Francisco, California.



Laboratory Work in Photography

By Sigismund Blumann



Probably no other occupation dealing with and requiring so much knowledge of technical science is pursued in so haphazard a manner as is photography. This is true of the professional as well as the amateur branch. What saves the

LABORATORY WORK IN PHOTOGRAPHY

pocket and the output of the professional is the fact that he works almost always under the same or similar conditions. The amateur essaying all things, daring and trying, fails cheerfully and goes on buying supplies. By the time he has tried and condemned every plate, film, paper and chemical, he has become wise or discouraged according to his makeup.

Beginning with exposure. How many of us have any absolute, even any half-definite idea of light value? Or color value? Or aperture? How many of us know whether our shutters are accurate? I for one am blissfully and culpably ignorant of them all. And that box of spoiled plates that some day I hope to clean off for clear glass is a mute and eloquent tribute to Messrs. Seed, Cramer, Eastman, et al. At least I shall not blame the manufacturers. There are too many successful artists among my friends who use what I use and who produce what I cannot produce. But Steadman's articles are filed away against the time when there shall be leisure to read and digest them. Then look out; I'll make a picture. In the meantime the little leisure that comes to me must be used in exposing more plates.

But when it comes to the dark-room I have you all beaten; beaten all the way and back. There isn't a chemical Dr. D'Arcy Power has mentioned in the past five years that is not on my shelves. And you will agree that is going some. They don't all do, in my hands, just what the articles promise, though they were made fresh and hermetically sealed by Merck, Mallinckrodt, or Schering. Sometimes a correction came weeks too late for my experiment, came when I did not feel like trying all over again. Sulphite for sulphide is not the only error that creeps past the proofreader. And believe me, when one photographic magazine quotes another, it is with accuracy. Probably every one of them, during nearly a year, told us how to tone our bromides with sulphite of soda.

Then those kallitype formulæ. Such beautifully elaborate directions! And the list of ingredients! You fellows who buy ready-mixed, concentrated developers and things like that can never guess the pleasures of laboratory work. It is the best part of photography. Any old professional can turn out good prints, but to try all the recipes that I have tried and fail to turn out a decent picture with any one of them, that is the proof of genius.

To go back to sulphide toning; the most beautiful browns ever seen, the most varied shades from cold brown to purplish, are being made by a friend who spurns all modern methods and sticks to the hot alum-hypo. Sulphide cannot give such colors.

About kallitype, I know something. I should. All that has been written on the subject in the English language is on my shelf. And I have tried every formula, twisted, modified and elaborated each. I exude kallitype, when I get excited, at every pore. And the best sensitizer has proven to be one that I throw together almost haphazard with a spoon for a measure. It contains the fewest possible ingredients and it works on any old paper that is decently free from chunks of metal and cobalt.

You all remember the developer that combined some metol, some hydroquinone, a little eikonogen and some Worcestershire sauce, a lot of sulphite,

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some carbonate (both having to be potassium, not soda), some salt and pepper, and lastly some phosphate, perhaps for jaded nerves. There were eighteen items in all; the concoction was guaranteed to give the best results possible. In fact, one ingredient omitted and the results would lack some essential quality of perfection. Then the Demon Strator with his "School" began to come around regularly, and, when we sneaked in where only the professional dared to tread, he handed us a pretty souvenir at the door and showed us how to mix up a developer without scales; even leaving out our old friend Bromide. The real inner inmost, the only right righteousness, lay in a little metol, about one and one-half or two times as much hydroquinone, sulphite to taste, carbonate, quantity sufficient, and water to make up to the required quantity; and there you were.

No wonder Brother Wade made enough out of a one-man studio to afford traveling for the Kodak Company. He could mix his developer with the left hand while unloading his plate holders with the right. And then the tank came along, and now the Hydrozine plate that cannot be over-exposed. One should be able to leave that plate lie about in the light of day before and after exposure and still get results. Oh! the bitterness of all this. The wasted hours of measuring grains and minims; of testing chemicals. The hours of suffering in close and black-dark closets, doing with scales and graduates what could be better done by an open window with a scoop and a dipper. History tells of a few who laid their lives on the altar of sacrifice, laid their cigars down on a hunk of cyanide, so dark it was, and on resuming their chew fell dead where they stood. And all for nothing. Local reduction can be done so much better with a pointed stick, wet by the tongue, dipped in emery powder, and rubbed expeditiously over the part to be reduced. Cyanide is too generous and indiscriminate a reducer.

What is all this about and whither does it tend? Hist! Listen! I have been a photographic enthusiast for fifteen years. I have, with cheerful spirit, contributed a generous share to that eighty-four million dollars. My dark-room contains, without exaggeration, nearly five hundred dollars' worth of chemicals. I have become, yes really, a proficient technical chemist. But I have yet to make a really fine negative or print. I am shamed by the ignorant friends who studied Latin, Greek, metaphysics, obtaining degrees of M. D., Ph. D., oh, all sorts of degrees, and found time to make prize-winning pictures, while I, full of wisdom, was grubbing away with every new photographic idea that came along.

L'envoy. For trade: A choice and assorted lot of chemicals; a complete collection of scales, weights, measures, graduates, tubes, etc.; a miscellaneous and more or less complete knowledge of chemistry; an ability to read and quote, sometimes correctly, the nomenclature of aniline products used in photography. All or in lots to suit for a little practical ability to take and make some good pictures. Let us pray.

In character, in manners, in style and in all things the supreme excellence is simplicity.—LONGFELLOW.

STEREOSCOPIC DEPARTMENT

Stereoscopic Separation

By W. C. Marley



With Two Illustrations by the Author

CAMERA CRAFT for June, 1912, contained various suggestions from different workers as to the trimming, mounting, composition, etc., of stereoscopic slides. Little agreement was shown regarding the correct amount of space that should be left between identical points in the two elements. Now there must be some normal separation which will best fit the eyes of the greatest number of persons when pictures are being examined in the stereoscope. Professional slides usually have these centers three inches apart, or even slightly more, and this practice of theirs is often given as a reason for similar spacing by amateurs. But is it not the case that many persons tire easily while examining a score of admittedly good commercial views? Should we hesitate to adopt another standard, if actual experience proves it a better one? It is a function of the lenses used in the stereoscope to magnify, but this effect is lessened in proportion as the slide is pushed away from the lenses. The wider the sepa-

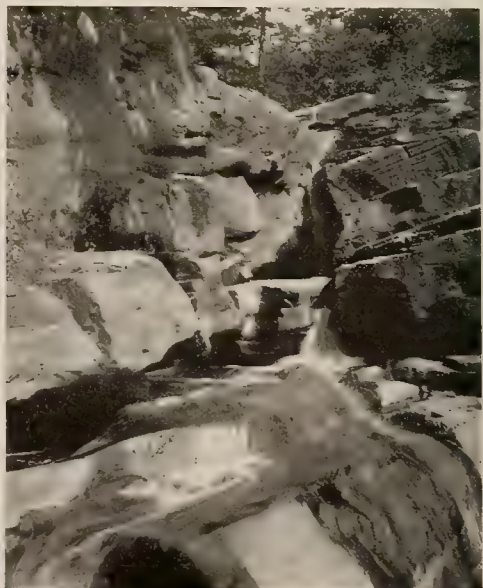


THRESHING RYE ON THE OLD BARN FLOOR

ration, the further off the picture has to be removed in order to "register" properly. The writer has found that two and seven-eighths inches separation enables nearly everybody to view a stereogram without eye-strain, and with the slide near enough to the lenses to give good magnification and detail. Some subjects, flower studies and the like, taken at closer range, can be well seen, mounted at even a narrower limit. Those who defend the three to three and one-fourth inch standard of separation seem afraid to sacrifice any portion of the view that appears in their negatives. Objects at the edges of their widely trimmed slides are hardly visible and are superfluous anyway. Why not cut them off, bring the elements nearer together and improve the whole effect? Why try to preserve that which diverts interest from the whole, from the real subjects, and in so doing make that subject harder to see? A large proportion of experienced stereo workers, both here and abroad, are of the opinion that two and seven-eighths inches is the best standard of separation, and most stereo manuals advise the same narrow trimming.

Creative Power

It is significant that the men of creative genius are, as a rule, men of the greatest productive power. One marvels at the magnitude of such men as Michel Angelo and Rembrandt, as Beethoven and Wagner, as Shakespeare, Balzac, Thackeray, Carlyle, and Browning; not discerning that, as these master workers gave form and substance to their visions and insight, the power to see and understand deepened and expanded apace with their achievements.—
HAMILTON WRIGHT MABIE.



THE SPARKLING WATERS OF A MOUNTAIN STREAM

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

CLEANING OLD NEGATIVES: A rapid and entirely satisfactory method of cleaning old negatives for the clean glass is to soak them two or three minutes in boiling hot water, then place in hot water in which a little sal soda has been dissolved, finally rubbing them with a clean, soft rag. Rinse in two or three changes of clean, hot water and wipe dry, while hot, with a soft cloth. Cleaning with any hard instrument is likely to scratch the glass.—E. L. S., New Mexico.

COLORING PHOTOGRAPHIC PRINTS: In coloring prints which have a semi-matte or half gloss surface, it is advisable to first go over the surface with a rubber called "Art Gum," as the color will then take more kindly to the surface and will not run into beads or tears as it is sometimes inclined to do through the repellent nature of the gelatine-coated surface. Using this gum has a tendency to rid the surface of the print of the apparent greasiness which the emulsion gives it. Since using this method of working, I would hardly be able to do without a piece of this gum. It can be purchased at almost any art store and at some of the photographic stock houses.—J. M. Reen, New York.

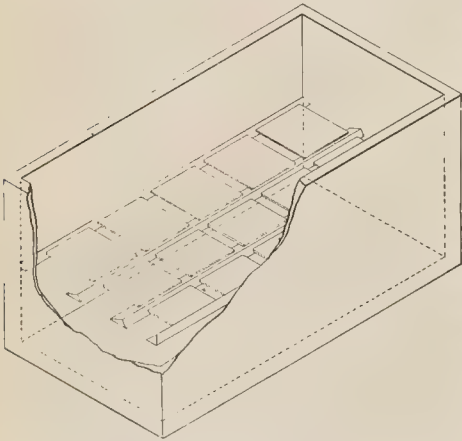
MAKING SHUTTER BLADES: My shutter is fitted with hard rubber wings that occasionally break and cause trouble just when I do not wish to be deprived of its use while it is sent to the factory for repairs. I overcome the difficulty by purchasing a sheet of the hard rubber of the desired thickness and cutting out the blades or wings as wanted. It will be found that if a piece be broken roughly to size and then immersed in hot water, it will become soft like leather and can be easily cut with a pair of shears to the desired shape. If it starts to get hard before the cutting is done, return it to the hot water. The only drawback is that the wing is inclined to curl as it dries, but this can be easily overcome by placing it under pressure until dry.—P. C. C., New York.

WASHING PRINTS: The usual method of washing prints by transferring them from one tray to another through twelve or fifteen changes of water, although admirable as to results, is a very slow and tedious process. For that reason the amateur worker is often inclined to slight that very important part of his work. My own method of washing prints may be appreciated by those

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having no regular print washer. I take any kind of a round bottomed, enameled pan of convenient size, or an ordinary washbowl will do. This I place under the faucet in the sink, but about two feet to one side, fill it partly full of water and put the prints face down therein. This prevents sand or other sediment which might be in the water from lodging on the picture side. I then take a piece of rubber hose, two or three feet long, attach one end to hose bib and let the other rest on the edge of the pan, a little to one side of the center. So arranged the force of the stream will cause the prints to revolve. When the pan becomes full the water will run out as fast as it enters and the prints will continue to revolve. Prints so handled will be thoroughly washed in twenty-five or thirty minutes, and no attention will be necessary.—C. A. ANDREWS, Washington.

WASHING NEGATIVES: I note a method of washing negatives by T. H. Holmes in a recent number of *CAMERA CRAFT*, wherein it is suggested that the plate be suspended on the under side of a block of wood floated face downwards in the water. It is rightly contended that in this way the hypo is more rapidly removed, being assisted by continuous gravitation, than by any other means. In fact, as will be found in *CAMERA CRAFT* of some years back, experiments have shown that a plate suspended face downwards in still water will



lose the whole of its hypo in a little over twenty minutes. Mr. Holmes' method is therefore much to be commended, is good in theory and simple in practice. I have long used it, but I cannot help thinking that my method of obtaining the inverted position is more simple in practice than the one advocated. My washing box is 14x17 and has, half way from the bottom and extending from end to end, strips of wood cut in triangular sections. These divide it into three divisions, on each of which five plates can lie, giving a capacity of

fifteen $3\frac{1}{4} \times 4\frac{1}{4}$ plates at one time. The accompanying sketch will show the arrangement. A piece of rubber tubing, extending from the water faucet, has its end dropped to the bottom of the box, and the hypo, as it sinks to the bottom, is thus immediately washed out. The position of the supports is such that the negatives can be placed thereon and removed instantly. Being half way down in the water the upper portion of the box may be used for washing prints simultaneously with the lavage of the negatives. Anyone can make a similar arrangement for himself; and, if he so desires, the pieces of wood forming the supports can be arranged in the form of a removable grid. One of the greatest advantages of this position of the negatives is that no dirt can precipitate on their emulsion side.—H. D'ARCY POWER, M. D., California.



CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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No. 5

The New Spring Catalogues

The photographer who fails to advise himself as to the many new models, new products and new materials, that are listed and described in the spring output of new catalogues is denying himself a pleasure and a profit that he can ill afford. Of course, we all think we will send for this or that one as we see it mentioned, but too often the thought is not carried into action. The makers of photographic equipment and material buy advertising space in our pages to acquaint you with their goods and to induce you to send for their printed matter, matter giving detailed information concerning their goods which the space in their advertisements does not permit them to give you. They spend no small amount in getting out handsome catalogues. They make these catalogues interesting to you by inserting a wealth of photographic illustrations, often going so far as to include much valuable information to encourage the keeping of the booklet by the recipient for future reference. And then the reader neglects to do his small part, the making of a request on a post card or in a brief note. Of course, these manufacturers are not desirous of sending out catalogues merely for the joy of so doing. They hope to reach only the users of photographic material, or those who may perhaps be made interested in photography. That is the main reason why photographic advertising is confined so closely to the photographic magazines. They have found that practically every inquiry that comes in response to their advertisement in the photographic press, comes from a possible customer for their goods, particularly if the goods are right. In the past, several individuals or firms have felt that this condition could be ignored; that an inferior line could be marketed at a profit by taking advantage of the inquiries for catalogues that could perhaps be more cheaply obtained by advertising in the popular publications having enormous general circulations. Results have invariably proven the fallacy of this idea. They did not consider the fact that the advertisement in a publication of general circulation had little or no weight to start with, no prestige except as it was also well displayed in the photographic press, where unreliable goods stand little chance. Neither did they consider that a large portion of the inquiries received from these publications of general circulation were more than likely to originate with those who were simply curious, "catalogue fiends" as they are known in the advertising field. The manufacturer of photographic goods has learned that, while the sending of a catalogue to a subscriber to a photographic magazine does not necessarily mean an immediate order, it does mean that the catalogue has fallen into good hands and that it will be given

consideration. He knows that if you are in the market for a lens, for example, you have perhaps sent for the catalogues of several other manufacturers or agents. He knows you will only buy from one, and that the others have sent a catalogue in vain, at least as far as that particular order is concerned. But he still knows that you may want another lens another day, and he is glad to have his catalogue in your hands. And all this means just this: The best manufacturers all advertise in the photographic magazines, they get out catalogues that are instructive to the readers, they are desirous of getting the readers to send for them, and, knowing these readers are possible customers and not "catalogue fiends," give their inquiries the best possible attention. The reader should examine the new spring styles in catalogues. It will well repay him to do so.

Mr. Hotte On the Coast

A. H. Hotte, of the Multi Speed Shutter Company, is, at this writing, covering the Pacific Coast. He reports business very gratifying in the Pacific Northwest and has only praise for the encouraging outlook in this immediate territory. His enthusiasm, his pleasing manner and his business-like methods have all combined to endear him to the trade in this section. A welcome awaits him upon his future visits, visits that it is hoped he will frequently allow himself.

Enrique Muller Here

Another welcome visitor here is the well known naval photographer, Enrique Muller, of New York. This gentleman has been the special photographer of the United States Navy and of the City of New York for many years. His marine pictures, particularly those of our fighting ships under headway, have never been equaled and his other work is also of the highest artistic and historical value. About three years ago, Mr. Muller was honored with a decoration by Emperor William of Germany, in recognition of his skill in marine and other photography, perhaps the only honor of the kind ever conferred upon a photographer. As Mr. Muller was here with the fleet at the time of the great cruise around the world, he has many friends and is finding his stay a most enjoyable one.

Mr. Steadman's Next Article

A letter from Mr. Steadman advises that he has in preparation an article made up of answers to questions that have reached him, through this office, in response to the invitation with which he closed his last article in our pages. In fact, Mr. Steadman assures us that he is at all times at the command of our readers who may wish any information concerning his methods. The major portion of the inquiries received were concerning his business of home portrait work, and this subject he will make the theme of his first forthcoming article. We might add that queries addressed to Mr. Steadman, care this office, are still in order.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Doing Rush Work

Of course the press photographer, the man who meets the rush requirements daily, is equipped for producing a print from any given exposure in the shortest possible time. But occasions arise when the ordinary worker, be he either amateur or professional, desirous of getting off a few prints in short order, finds the problem a new one to him. It is generally desirable that the prints be fairly permanent, and for this reason, while all the other operations can be slighted at the moment, the fixing of the print should be thorough and the washing fairly so. But as the two longest operations between the making of the exposures and the production of a print are the washing and drying of the negative, both of which can be materially shortened, much time can be gained without sacrificing permanency of the print to any great extent. Beginning with the exposed plate, development should be undertaken with a solution of the fullest allowable strength, preferably some quick acting developer such as metol-hydro or pyro-metol. The negative, after development, is rinsed for a moment and then placed in a fresh fixing bath of the usual strength. Nothing is gained by using a strong solution, as increased strength only slows the action. Drying of the negative can be neglected, as it is quite as easy to print from it in the wet condition as when dry, if gone about in the right way. The washing that should follow fixing can also be neglected, except for a slight rinse under the tap, until after the required prints are made. There are several methods of printing from a wet negative. One is to squeegee a thin sheet of celluloid to the film side, wipe its face dry and also the back of the negative and print in the ordinary way on gaslight paper. If the negative can be given a little washing, enough to remove the hypo to such an extent that it will not contaminate the paper, the paper itself can be moistened and squeegeed to the wet film for printing. This last plan is not to be recommended, as there

is always danger of damaging the film in pulling off the paper after exposing. The best plan is to put the negative, still wet from the slight rinse after fixing but wiped free from surplus water on the film side and dry on the glass side, directly into an enlarging camera. This plan is all the more satisfactory because it results in a larger print, something always desirable in work intended for newspaper reproduction and the like. If daylight is employed for enlarging, the negative will not be in position long enough to become dry in spots and the emulsion will not suffer. However, if artificial light is used there is danger, not only of the film drying in places, but of the heat of the light being sufficient to cause the emulsion to melt and run. This can be avoided by placing an unexposed plate in the fixing bath at the same time the negative goes in, giving them both the same treatment, and then bringing these two film to film before placing in the enlarging camera. The film of the negative and that of the unexposed and clear plate will be sealed up between the two sheets of glass and remain damp and cool for quite an extended length of time. After the desired prints are made, they may be slid apart, the negative given its customary washing and drying, and filed away. The print, be it either a contact or enlargement, should be fixed for such a time as is deemed necessary, as its permanency depends greatly upon this part of the work being complete. If fixing is slighted, the print contains a chemical compound that turns yellow with very little exposure to light, and this renders it almost impossible of reproduction by the newspaper to whom it is sent. Once fixed, the washing is not so important. The removal of the major portion of the hypo can be hastened by placing the print on a sheet of glass, soaking it with water from the tap, squeegeeing it fairly dry, and then repeating the operation a few times. Drying need not take long if the print be placed, after the final squeegeeing, in a good current of air. However, the best plan is no

doubt to mount the print in the damp condition, when it can at once be sent along or delivered if so packed that its surface is protected from the wrapper. Pinning the mounted print in the bottom of an empty plate box is a favorite method; in fact, two prints can be sent in one box by pinning one to the top and the other to the bottom.

Photographing Waterfalls

A recent caller brought with him a number of very fine pictures of waterfalls that he had made for a development company. There were some twenty in the collection; and, with but two exceptions, the waterfalls were surrounded by such a growth of forest and underbrush that the light, naturally poor on account of the ravine locations, was almost entirely cut off. He tried the common method of exposing for the banks and allowing the water to take care of itself, but in these particular cases it did not work. The required exposure was entirely too long and the water looked like anything else but a fall or cascade. Then he went to work and made two negatives of each, timing one for the dark surroundings and another for the waterfalls. It was not a difficult matter to block out the water in the first, as they had practically blocked themselves out, and the foliage in the latter being hardly more than clear glass, they presented no great difficulty. Double printing gave him the fine results shown us. Of course the dodge is far from being new, but as I have seen hundreds of such pictures that could be improved greatly by following this plan, the suggestion may be of value to some of our readers.

Stripping Films From Plates

A correspondent has been trying several methods, including one described in our pages some year or more ago, and with poor success. The fact of the matter is that no method we have ever tried will work the same in all cases. Plate makers do not all use exactly the same kind of gelatine, and then the action of different developers is not the same. While pyro seems to harden the film and encourage it to come off in a whole sheet, some other developers do not do so. Still again, the conditions under which one works have much to do with the behaviour of the film after being washed and dried. Quick drying, following the use of fresh developers and fixing baths, tends to a good structure of the film for subsequent opera-

tions, while slow drying and the use of old solutions and fixing baths heavily charged with silver seem to tend towards a film that simply dissolves or disintegrates when again softened. If negatives such as the last are to be dealt with, the only remedy is to give the film a coating of gelatine solution before proceeding with the stripping.

H. & D., Watkins and Wynne Meter Numbers

A number of correspondents have evidently purchased the excellent Heyde Meter, but are unable to make use of the H. & D. speeds which it employs, when they wish to compare them with the Watkins or Wynne numbers. The American agents have the desired information in preparation and it will be supplied very shortly, we believe. However, to answer the last few inquiries on the subject, we will say that H. & D. numbers can be converted into Watkins by multiplying them by fifty and dividing the result by thirty-four. To convert these last into Wynne, extract the square root and multiply by six and four-tenths. Mortimer's "Dictionary of Photography" advises that this method has the approval of both the Watkins and the Wynne people.

Some Information Wanted

We all make the mistake of writing out directions and, in doing so, forgetting that what may be quite well known to ourselves is not known to others who may read what we write. Three inquiries within the last few days have emphasized this fact. One writer has a good description of how backgrounds can be made at home, but he does not know what is meant by the glib advice to "first size the cloth." Size is simply a ten per cent solution of common glue, warmed and applied in that state. Another has been told to apply a coating of oak or church varnish, and his paint dealer does not know what is wanted. What he wants is a varnish containing linseed oil, a slow-drying one. Still another writes to ask where he can obtain Schlippe's salt, as it is not known to his photographic dealer or his druggist. The name would be clear to any old druggist, as it was at one time quite common in some sections. What he should ask for is sodium sulphantimonate. Of course, all three got a reply by mail, but I have thought perhaps the information might interest others.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

A Developer Which Gives Brown Negatives

Harry Craig, writing in *Photography*, says: "One of the characteristics of pyro-developed negatives is the color of the image. Only if the developer has contained altogether an excessive proportion of sulphite will it have a perfectly black color such as most of the other developers give. It is usually brown-black or greenish black, and may be anything from this to yellow. The writer is not one of those photographers who have a fancy for the plain black negative, which is always so much thinner than it looks. Better by far is it, in his opinion, for the opposite feature to prevail, and the negative to be denser than it seems.

"On theoretical grounds it is easy to show the advantage of the brown image given by pyro over the blue-black one resulting from metol or other developers. Practically, the color is admittedly advantageous. Theoretically, also. We are told that the more we can keep the image on the surface of the negative, the better. The halation image lies deep in the film, and to avoid halation a system of development should be adopted which does not have to be carried down so far as to risk developing the halation also. Now there can be no doubt that if two negatives are developed to the same extent, one with a non-staining developer and the other with a suitable pyro developer, the latter, from its color, will have greater printing density. So that it follows from this that, if the two are to have the same printing density, one will need less development than the other.

"The prevailing impression seems to be that the stain which we get with a pyro developer is a sort of general yellowness extending equally all over the plate, much as we might expect it to do if we dipped the negative in some yellow dye. But this is not the case at all, as can easily be shown. If we take a negative that has been developed

with pyro, so as to have a decidedly brown image, and treat it with the ferricyanide-hypo reducer, which, if carried far enough, as every one knows, will take the whole of the silver image away, we shall find that when that reducer has acted as far as it will go, when there is no more of the silver image left, in short, there is still a negative of the subject on the glass, perfect in all its details, consisting of a fine, structureless, grainless image of stain alone. In bad cases there may be stain enough left to give a good print. So that the stain is actually a reinforcement or intensification of the original image, deepest where this was densest and vice versa. No wonder such stained negatives give prints with plenty of contrast.

"For years the writer has used a pyro developer which is made up on the ordinary lines, except that it contains only a very small proportion of sulphite. The stock solution of pyro is made by dissolving three ounces of sodium sulphite in seven or eight ounces of warm water. Ten drops of hydrochloric acid are added, and then an ounce of pyro. Lastly, the solution is diluted to make nine ounces one dram in all. This gives, approximately, a ten per cent solution. The other solution is merely a pound of sodium carbonate dissolved in water to make eighty ounces. For use, twenty minims of the pyro solution and two drams of the soda are diluted to make an ounce.

"This developer gives a fine brown-black negative in the ordinary way, which, if fixed in an acid-hypo bath and washed in running water for half an hour, will be found to be of that color when it dries. If fixed in plain hypo, the color will be more of a yellow green; or, if it is left under a gentle stream of water from the tap for an hour or two, it will be noticed that it gets more yellowish green the longer it is washed. If, on the other hand, we give it a bath of very dilute hydrochloric acid after washing and before drying, only just rinsing it after the acid, it will be

CAMERA CRAFT

turned almost a pure black. One dram of acid to four ounces of water is the most suitable strength for this purpose.

"It will be seen, then, that we have here not only a developer which gives a vigorous image very easily, much more easily than other developers, but also one which allows us a certain control over its density in the washing process. If we think it is too thin, then it may be left washing for several hours, when it will get yellower, that is to say, as far as printing is concerned, denser, all the time. If it is too dense, we can make it print softer by taking care not to wash it for too long a time, or, in a bad case, by giving it an acid bath as described.

"It ought to be pointed out that the color of the negatives depends to some extent upon the quality of the water supply. If the water is very hard, they will be decidedly browner than when soft water is used. If the color is at any time too pronounced, a little more sulphite may be added to the developer, but my own preference is for the formula given above."

Focusing With Reflex Cameras

Photography and the *Amateur Photographer* have recently called attention to a new device for focusing the image with cameras of the reflex type where the details are small or the eye of the photographer requires spectacles. It is known as the Metron Focuser and consists of a flap inside the focusing hood containing two lenses in an ordinary spectacle frame. I have not seen the exact device, but I have been using a quite similar arrangement for some time. I have used a piece of leather sewn into the inside of the hood, split in half and containing two periscopic lenses. In my case, +4 lenses at the proper distance bring the ground glass into sharp focus. Practically, it is often advisable to place this about one inch below the level of the entrance of the hood. The piece of leather containing the lenses is easily folded down and stowed away when the hood collapses. Such an arrangement can be made by any camera worker, and in my case was made by Messrs. Hirsh & Keyser, of this city. Another device which the English manufacturers are using is to reverse the ground glass so that the roughened side is upward. It is pointed out that this avoids reflections from the surface which, in case of strong light, are

often dazzling to the eyes and interfere with correct focusing. I have not tried this out, but I can quite see the value of the suggestion.

White Margins to Enlargements

The narrow white margin obtained by masking a direct print is often very pleasing, writes "C. E. B." in the *Amateur Photographer*, but has the drawback that the picture cannot at the same time be trimmed to its best advantage. This objection, however, is not felt to such an extent in enlargements, as the picture can generally be arranged on the easel beforehand. Those who desire to finish some of their enlargements in this manner will find the following device not only easy to construct, but a very useful accessory to the darkroom, enabling the bromide paper to be moved about to any extent with a minimum of risk as regards finger-markings—a very important point.

Two fairly thick pieces of white cardboard should be obtained, measuring about six inches longer each way than the size of the desired enlargement. Thus for a whole-plate picture, fourteen by twelve inches would be about right. From the centre of one of these cards an opening should be cut with beveled edges, the inside of which should measure eight by six inches. The bevel should be neatly blackened with Indian ink or "artist's black." Reversing the card, a thick dark line should be drawn round, and one-fourth inch from, the opening. The second piece of card should now be laid upon the first, leaving the beveled edge of the latter facing downwards. Finally, the two cards should be closely hinged from the outside by a strip of bookbinder's linen and a little glue. If the former is not handy, a piece of calico may be used. A fairly large "bull-dog" clip completes the equipment.

In use the card is opened out, and bromide paper laid face downward over the opening, the lines around the edge serving as a guide to its correct position. The back is brought over and secured by means of the clip, and the paper, being now framed, can be moved about freely without any risk of finger-marks. The means of attachment to the easel will, of course, vary according to circumstances; but in cases where this is done by means of drawing-pins, it is recommended that the "frame" be first pierced by a thick needle, or some similar instrument, and the same

A PHOTOGRAPHIC DIGEST

holes always used. If the edges of the "frame" extend beyond the easel it will probably not be necessary to remove the clip, but if this is not the case, care must be taken that the paper does not slip before it is fastened down.

The Bichromates As Intensifiers

The use of hydrochlorate acid and bichromate of potash as an intensifier has long been known and much practiced, with excellent results. But that a simple solution of potassium or ammonium bichromate could act equally as an intensifier has not, to my knowledge, been reported in books dealing with the subject of intensification. Recently, while making some experiments connected with the use of aniline dyes and bichromate of potassium, I had occasion to intensify one part of an extremely weak negative with an ordinary two per cent solution of ammonium bichromate. I noted at the time that while the negative was in the wet state there was a decided increase in the silver deposit, with an appearance of general intensification. As an experiment, I dried the negative and then exposed it to sunlight until the gelatine was thoroughly acted upon; washed in water, dried and printed. This done, the bichromated half of the negative showed an intensification perfectly even in character and without the least sign of staining, at least equal to that yielded by the average acid-bichromate solution or by ordinary mercury and ammonia intensification. I do not know whether there will be any especial advantage in regard to time in the use of such a solution with its secondary exposure to light and washing as against the simple intensification of the acid bichromate, but it is interesting and has at least this advantage, that the action of the bichromate upon the silver image is practically confined to it, leaving nothing in the way of change in the gelatine beyond rendering the latter more impervious to the action of air and water, making, in this way, a more indestructible negative.

The Lumiere Method of Toning Bromides

Herr O. Mente, in this month's number of *Das Atelier Des Photographen*, reviews the recent process of the Lumière Brothers, and points out that it may have important use in the commercial production of bromide prints. He states that in the past it has hap-

pened that the method of double toning makes it awkward and expensive to produce photographic post cards on a large scale. The old method employing hot hypo and alum, whilst giving excellent tones, has an even greater disadvantage for commercial purposes in that it required careful manipulation of a hot solution. The modern method of the Lumière's consists in employing sulphur in the colloidal state. A bath is made up consisting of a solution made up as follows:

Hyposulphite of soda.....125 grammes
Dextrine, 50% solution.....250 cubic cent.
Water, to make..... 1 liter

In this solution the bromide print is immersed about twenty minutes; but, when it is removed from the bath and afterwards washed in water, it gradually assumes its proper tone, and by washing for about an hour and a half, it reaches the perfect tone of a well-developed bromide print. Herr Mente states that he has been carefully over this method with all the varieties of bromide paper and finds it perfectly successful in all respects except that the strength of the print is decidedly reduced; and that with it, as with the old hypo and alum method, it is necessary to print the bromide a deeper tone than normally. The writer has some doubts as to whether this difficulty in regard to the lighting of the print may not act as a hindrance in its commercial utilization on a large scale, as also the question as to whether the long-continued washing may not also interfere with it in this respect. Otherwise he is able to verify all that is claimed in behalf of the method as to purity of tone and clearness of the whites in the resultant prints.

A Wind Screen For Flowers

Some years ago I was desirous of making studies of native wild flowers for botanical purposes, attempting to photograph them in the open. My attempts were at that time almost entirely frustrated by the impossibility of making exposures which should be so arranged that I could get detail in the flowers, which of course necessitated stopping down, and at the same time keeping them at such perfect rest as would assure negatives free from blur. Even on the quietest days there is always enough motion in the air to cause finely poised flowers and leaves to change their position in the course of several seconds' or perhaps a full minute's

exposure. I ultimately gave it up, resorting to the expedient of having the flowers removed from their natural situation and taken into the house. I have just noticed in *Photography* some remarks concerning the work of R. A. Melby, who has been taking flowers growing in nature in Alpine regions. He, following a suggestion of Sommerville Hastings, used a wind screen constructed in the following manner: Six feet of strong calico eighteen inches wide is divided into six or seven sections by pieces of tubing sewn in across the narrow surface of the material. Into these tubes strong umbrella ribs are thrust, arranged so that there shall be sufficient to stick in the ground and hold the cloth screen in any way that may be necessitated by inequalities of the surface. In this way, Mr. Melby has secured most beautiful pictures in regions where the wind conditions are worse than they are with us. The method seems entirely capable of use here, and I hope to see it employed by our amateurs to the end that we may have photographs of flowers in nature. These, if properly taken, might not only be of great scientific value, but also objects of beauty in themselves. Such subjects open up an interesting field for many of our amateurs who are sadly in need of some way of using their hobby that does not involve work that has already been done too often.

A New Color Plate

Since the autochrome plate made its appearance many competitors have entered the field, and their poor success seems only to stimulate new effort. The last comer, or rather the last promise of a comer, is the invention of J. H. Christensen, of Denmark, and is described quite fully in *La Photographie de Couleurs* by the editor thereof. The principle of the new plate is easily understood. If gum lac is dissolved in alcohol, and the solution shaken with turpentine, an emulsion results, the particles of which can be regulated in size by the amount of the shaking. If color be added to this solution of lac, the resulting globules of the emulsion partake thereof. If now the lac solution be divided into three parts are each dyed after the manner of the autochrome starch granules, and the solutions mixed in the right proportion, the mixed emulsion will precipi-

tate these colored particles on to any surface over which it is spread, and this last may be a film on a glass plate. Moreover, such colored drops will be more evenly mixed than would solid particles such as those of starch; and, as the menstrum in which they are suspended dries, they will spread out so as to completely cover the surface. In practice the adhesion of the emulsion is secured by first coating the plate with rubber. As in the other screen plates, the colored layer is separated from the emulsion by an impervious varnish. The plan sounds good, and as the well-known A. G. F. A. people have taken it up there must be a prospect of its commercial success.

The Rapidity of Short Focus Lenses

In a recent note we referred to the extreme sharpness noticeable in the negatives produced in modern extra small cameras. Another fact that is even more evident, though tradition leads many to look upon it as an error rather than a fact, is the great rapidity of the short-focus lenses with which these cameras are fitted. The popular idea that lenses of the same aperture are necessarily of the same rapidity is, of course, erroneous, for it leaves out of account all factors other than aperture which affect rapidity. Two of these factors are loss of light by reflection from the glass surfaces and loss by absorption within the glass, both being of very considerable importance. If we have two lenses of identically the same pattern and aperture, but of different focal length, then while the loss by reflection should be the same in each case, the loss due to absorption must be different owing to the varying thicknesses of the glasses used. Thus a three-inch lens must be faster than a six-inch lens of same aperture and type, owing to the fact that the light passes through only half the thickness of glass. The variation cannot well be estimated, as much must depend on the kind of glass used and the rays it absorbs; therefore it is to be regretted that so few attempts seem to be made to measure the actual efficiency of lenses. It is misleading to rely as we do upon focal length and aperture alone for the estimation of rapidity, and the introduction of the small camera with its short-focus lens has done much to emphasize this fact.—*British Journal of Photography*.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

Circulating Post Card Album

The Director of the Post-Card Division has recently received an increased number of inquiries concerning the circulating albums. This division has not, heretofore, maintained circulating albums; but, if so doing will assist the members to make better cards, your director will be more than pleased to make up albums and route them to those desirous of receiving them and who will contribute work thereto. Coming from this division, the albums should be made up of post cards exclusively, and to that end contributors should see that their cards are full size. This does not mean that the picture must cover the full face of the card. Some very pleasing effects can be secured by the masking of a small negative and printing it with a border or a shaded effect about the edges.

Owing to the postal regulations governing third-class matter, no writing will be allowable upon the cards intended for these albums, and contributors will therefore send titles and other particulars on a separate sheet of paper. For the same reason, the list of titles, the route list, and any other writing that may be necessary will be contained within an envelope to be mailed at letter postage rate at the same time the album is mailed as fourth-class matter at the lower rate. These albums will be kept within a weight that will limit the postage to ten cents, and I feel sure that no member will regret that expenditure for the privilege of inspecting one of these circulating sets. While it will perhaps be possible to route these albums to other than the contributors themselves, I desire to give each album as many contributors as possible, and to that end would ask all who can to send in samples of their work. While two cards from each contributor may suffice to make up an album, I would prefer to have contributors send a larger number, as I hope to have several albums on the road at once. These albums will be routed to reach only those

who advise me that they wish to receive them. Therefore, I would suggest that such members send me their names and addresses at once while the matter is fresh in their minds, together with whatever cards they may wish to contribute.—Charles M. Smythe, Director Post-Card Division, 1060 Detroit Street, Denver, Colorado.

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smythe, 1160 Detroit St., Denver, Colo.

George E. Moulthrop, Director Lantern Slide Division, Bristol, Conn.

Edward B. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

FOREIGN SECRETARIES.

French—Charles A. Wagny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German—George N. Baumiller, Nutwood, Ohio.

STATE SECRETARIES.

Answers to inquiries concerning membership and membership blanks will be supplied by the State secretaries. Album directors are at present acting as State secretaries in such of their respective States as have as yet no secretaries.

California—W. E. Thomson, 3540 School St., Fruitvale, Oakland.

Idaho—Eugene Clifford, Weippe.

CAMERA CRAFT

Indiana—R. A. Underwood, 912 E. 15th St., Indianapolis.
 Kansas—H. H. Gill, Hays City.
 Missouri—J. F. Peters, Room 210, Union Station, St. Louis.
 New York—Louis R. Murray, Ogdensburg.
 Oregon—F. L. Derby, La Fayette.
 Wisconsin—F. W. Freitag, 500 Monument Square, Racine.
 Mississippi—George W. Askew, Jr., 211 34th Avenue, Meridian.

NEW MEMBERS

- 3638—T. D. Fields, 142 Lakeview Ave., San Francisco, Cal.
 Class 2.
 3639—Cesareo Castilla, Calle Urbietta 55, San Sebastian, Spain.
 All sizes, various papers, of Spanish scenes, bull fights, Spanish dances, pictures of the King and Queen, Arabic and old monuments; for scenes from California, cowboys, Redmen and Chinese, and from other countries, national scenes. Class 1.
 3640—Harold R. Vant, Deerfield, Ill.
 Anything up to 5x7, developing paper, of miscellaneous homestead life, Elks' parade, portraits; for nature studies, historic and Western scenes. Class 1.
 3641—R. C. Allen, Lock Box 12, Callender, Iowa.
 4x5, developing paper, of general views, and miscellaneous subjects; for the same or any subject of interest. Post cards only. Class 1.
 3642—Ralph W. Denny, R. F. D. No. 3, Box 27, Guthrie, Okla.
 Class 2.
 3643—Wolodymyr W. Werhun, P. O. Zhoda, Manitoba, Canada.
 Class 2.
 3644—Louis E. Hastings, Box 608, Pasco, Wash.
 3¼x5½ and smaller, various papers, of children, desert and sagebrush views; for general views. Post cards and prints. Class 1.
 3645—Ed F. Hickish, 2575 Dexter St., Denver, Colo.
 Class 2.
 3646—Albert S. Nelson, Glenwood, Minn.
 Postcard size, 5x7 and larger, developing paper, of art and art views, also lantern slides; for the same. Class 1.
 3647—Albert Muffett, Mackay, Idaho.
 Class 2.
 3648—Willie Hawley, Vernon, Texas.
 Class 2.
 3649—Al Swainson, Electrician, U. S. S. "South Dakota," care Postmaster, San Francisco, Cal.
 3¼x5½, developing paper, of views of foreign countries, marine views, and Hawaiian scenes; for country scenes, ranch scenes, landscapes, and mountain scenes. Class 1.
 3650—Mrs. Selma C. Royce, R. F. D. No. 3, Stafford Springs, Conn.
 2½x4, 3¼x4¼, 3¼x5½, developing paper, of local views of various places in Connecticut, landscapes, animals, and river scenes; for similar subjects, historical, wild animals, mountain scenery, and anything out of the ordinary. Desires only unmounted prints with full particulars on the back of each. Class 1.
 3651—William J. Stiehl, St. Croix Falls, Wis.
 Class 2.
 3652—Hilbert Anderson, 1227 Washington St., N. E., Minneapolis, Minn.
 Class 2.
 3653—Frank Waterfield, 698 P. E. Bldg., Los Angeles, Cal.
 Class 2.
 3654—Clarence F. Gibson, 717 Bell St. Akron, Ohio.
 3¼x5½, developing paper, of scenes of general interest; for the same. Post cards only. Class 1.
 3655—S. W. Giere, 714 St. Olaf Ave., Northfield, Minn.
 3¼x4¼, developing paper, of outdoor rambles, student life at college, and flashlights; for mountain views, nudes, artistic and historical landscapes, flashlights and marines. Prints only. Class 1.
 3656—George C. Held, 1019 Haight Ave., Portland, Ore.
 Post cards, 4x5 and 5x7, various papers, of Oregon scenery, and speed photography; for miscellaneous subjects from any place. Would like some views from Oakland and San Francisco, California, and Clinton, Iowa; also want speed pictures. Class 1.

RENEWALS

- 188—Edward Truman, Genoa, Neb. (Was Burton, Ohio.)
 Class 2.
 2151—Pres Fidler, Weed, Cal.
 Class 3.
 2232—J. L. Park, 7939 Susquehanna St., Pittsburgh, Pa.
 Will exchange odd and unusual stereos only. Class 1.
 2246X—L. E. Millea, 357 Main St., Norwich, Conn.
 Class 2.
 2251—E. S. Harvey, Lebanon, Ind.
 4x5, 5x7, and 8x10, developing papers and sepia, of landscapes and general views; for the same. Class 1.
 2359—Joel Atkinson, U. S. S. "Cincinnati," care Postmaster, San Francisco, Cal.
 5x7 and post cards, developing and printing-out papers, of views of the Philippine Islands and China, marine views, life on a man of war; for views of general interest. Will answer all exchanges promptly. Class 1.
 2479—Mrs. Lois E. Gundelach, Huntington, Ore.
 Class 2.
 2688—Chas. C. Ferris, R. F. D. No. 3, East Syracuse, N. Y.
 Class 2.
 2889—O. E. Rupert, Trueman, Pa.
 Would like to exchange anything from the small prints or cards up to 6½x8½, of anything interesting, any subject. Send me something and you will get something in return. Class 1.
 3300—Clyde Merritt, R. F. D. No. 3, McCune, Kan.
 3¼x5½, developing paper, of landscapes, miscellaneous and country scenes; for anything of interest. Prints or post cards—no portraits. Class 1.
 3325—Mrs. I. M. Bard, Box 72, Arcadia, Texas.
 3¼x5½, developing paper, of landscapes, typical views, and views of general interest; for scenery, landscapes, Western pictures, hunting, mountains, and views of general interest. Class 1.
 3329—George R. Bunn, 1571 W. First St., Los Angeles, Cal.
 3¼x5½ and smaller, developing paper, of Yosemite National Park, other wild mountain scenery, Southern California views, and a few artistic nudes and semi-nudes; for views of a similar nature. Only good work given and desired. Class 1.
 3330—Anthony J. Buchal, R. F. D. No. 4, Olivia, Minn.
 Post cards only. Will exchange out and indoor views, flashlights, and enlargements on glossy post cards. Class 1.
 3333—George A. Wilson, Box 171, Sutherland, Neb.
 Class 2.
 3348—Ingenior C. J. Brodersen, Gl. Kongevej 121, Copenhagen, Denmark.
 Class 2.

CHANGES OF ADDRESS

- 1769—C. W. Junktens, 1322 N. Keystone Ave., Indianapolis, Ind.
 (Was Lupton, Mich.)
 2970—C. W. McAlester, Box 561, Coalinga, Cal.
 (Was Oilfields, Cal.)
 3387—L. H. Dobak, R. F. D. No. 1, Correll, Minn.
 (Was Ortonville, Minn.)
 3449—Gordon G. Macdonald, Box 996, Prince Albert, Sask., Canada.
 (Was Kvie, Sask., Canada.)
 3535—H. W. Miessner, Box 655, Canby, Minn.
 (Was Stewart, Minn.)
 3568—George W. Teasdale, 462 Hartford Ave., Los Angeles, Cal.
 (Was Kennett, Cal.)

WITHDRAWAL

- 3078—C. A. Andrews, Leland, Wash.
 Is too busy to exchange at present.

CLUB NEWS AND NOTES

Club Secretaries and others will oblige by
sending us reports for this Department

The Pacific Photo Club

After several months of persistent effort on the part of a few enthusiastic camerists, the Pacific Photo Club of Alameda County, California, was organized at a meeting held in Oakland, Thursday evening, March twentieth last. The three arch conspirators, Sigismund Blumann, A. E. Davis and W. E. Thompson, arrived at Maple Hall shortly before eight o'clock, and awaited the result of the eighty invitations sent out. Eight o'clock, eight five, eight ten, eight fifteen, and eight twenty came and went. A step was heard. The door opened and Doctor Bush appeared. Others arrived in rapid succession and soon the meeting was called to order. Organization was effected and the following were declared temporary officers: Sigismund Blumann, President; C. W. Hayden, Vice-President; A. E. Davis, Secretary, and W. E. Thompson, Treasurer. Committees were appointed on by-laws, on rules and regulations, on publicity, and on headquarters.

The new club has been assured the support of the Oakland Chamber of Commerce, the Commercial Club, the local press and the photographic trade. Two new members joined at a following meeting, and others have promised to do so at the next following one. At present a small initiation fee is charged, but this will be increased beginning with July first, when the charter will be closed. The headquarters committee have not been idle, and by the time this is printed the new club expect to be occupying quarters most conveniently located on Broadway, and these will be equipped with apparatus, dark rooms, facilities for enlarging, and a reading room, as fast as conditions will permit. All of the present members are enthusiastic; and, while busily engaged in a campaign for new members, they are determined that should they not be able to increase their number they will have a club of their own, only.

Following is a list of the charter members to date: Allan M. Clay, A. E. Davies, Dr.

W. P. Bush, Sigismund Blumann, George Vincent, Larrance Page, Charles T. G. Smith, C. W. Hayden, W. D. Smith, J. A. Tillmany, and W. E. Thompson.

California Camera Club

Tuesday evening, April eighth, the annual election of the California Camera Club took place, and the following successful candidates will comprise our next administration: President, C. Willard Evans; First Vice-President, W. G. Hartranft; Second Vice-President, H. E. Poehlman; Secretary, J. P. Zipf; Corresponding Secretary, E. R. Shirley; Treasurer, L. R. Reynolds; Librarian, H. T. Bielawski. Directors chosen in addition to the above officers were: Charles Sawyer, Edward H. Kemp, A. T. DeRome and Charles A. Love.

The annual reports, as submitted by the chairmen of the various committees, show that much good and effective work has been accomplished during the past year. With very few exceptions, all committees have fulfilled every requirement regarding their respective duties. The club, thanks to our demonstration committee, has been especially fortunate in obtaining the services of well-known authorities, who, on different occasions, have appeared before us and given demonstrations dealing with almost all the different phases of photography. These, to the number of thirty, have been given during the year, and have proven a valuable aid, both to the advanced worker and the beginner.

The popularity of our outings is evidenced by the fact that the number of those attending is constantly increasing. As a promoter of sociability, there is nothing more effective than a successful outing. The members become more thoroughly acquainted with each other, and they keep up the social interest. As we do not exclude non-members, our outings have gained for us many new applicants. Nine were given during the year. Last month we visited the beautiful Santa Clara

Valley and photographed in and among the fruit blossoms. The results of this outing will be on exhibition at the club rooms.

During the past year our membership list has been increased to the extent of sixty new members, and on the whole we feel very much gratified at the good showing the club has made, much of which is due to the efforts and zeal of our retiring president, Edward H. Kemp, and his fellow officers.—E. R. Shirley, Corresponding Secretary.

Color Photography Competition

The Societe Francaise de Photographie announces its fourth annual competition of photographs in colors which will close April fifteenth next. The competition is open to all photographers, either amateur or professional, and any class of subjects or photographs in any color process will be admitted. Competitors will engage to send only the work of

their own hands. When submitted by a proprietor, the work should be designated as that of his studio. All entries should be sent post-paid under a nom de plume and accompanied by a description of the subject and the conditions under which each picture was taken. The competition is divided into sections as follows: No. 1, Transparencies to be viewed by daylight. No. 2, Lantern Slides. No. 3, Stereograms. No. 4, Scientific subjects. No. 5, Photographic reproductions in color or monochrome or screen plate photographs. In classes one and five not less than three nor more than twelve should be submitted. For the others no less than ten nor more than twenty. A number of medals will be at the disposal of the jury. Entries should be addressed to the secretary of the Societe Francaise de Photographie, 51 Rue de Clichy, Paris, France.



The Photographer's Association of America

The Kansas City Convention

May first the treasurer of the Photographers' Association of America will begin an active membership campaign. It is his purpose to close the Kansas City Convention with a membership of two thousand five hundred. In order to reach this figure it will be necessary for every one who attended the Philadelphia Convention last July to renew their membership for 1913 and for those who paid at St. Paul in 1911, but not last year, to pay for 1912 and 1913. Members will receive statements May first, and it is hoped every one will remit. In addition to the above, we must have many new recruits. Can we not count on you to do your share?

Kansas City Convention Hall, where the convention will be held, is the largest hall ever placed at the disposal of the Association. The entire show will be under one roof. The main floor of the building will be used by the manufacturers and dealers for their exhibits, which will be unusually numerous and extensive and of special interest, with all the new inventions and productions shown.

The business meetings will be held in the balcony at one end of the convention hall.

At the other side, provision will be made for meetings of any State Association whose convention has been postponed for 1913. On the program there will be no long, tedious, uninteresting lectures; instead, a few crisp, snappy talks, full of good meat that you will not only enjoy while there, but they will give you something to take home and profit therewith.

The Women's Federation, under the leadership of Katherine Jamieson, of Pittsburg, and the Commercial Photographers' Federation, headed by President R. W. Johnston, of the same city, are planning programs that will be especially interesting to the ladies and to those who are engaged in commercial photography. The exhibits of both these organizations will be made under the rules governing the regular exhibition.

The picture exhibits will all be properly lighted so that there will be no choice of position. Five pictures have been requested from each exhibitor and all rights will be passed on by a competent jury before being hung. A jury will also select not over twenty of the best by members for illustrating the 1913 Association Annual. All pictures sent for exhibition must be sent to First Vice-President Manly W. Tyree, Con-

OUR BOOK SHELVES

vention Hall, Kansas City, Missouri, and must reach their destination by July fourteenth. They may be framed or not, and may be any size and printed on any medium, but must not bear the name of the maker. Pack them carefully and send prepaid with the name and address of the sender on the under side of the box cover.

The Kansas city photographers and dealers are very actively engaged in preparing for our entertainment. The hotel facilities

are ample and of the best quality. The Baltimore Hotel, the headquarters, is equal to any of the high-class hotels in the East and there are numerous others.

Detailed information concerning the program will be given out later. Watch for it. While you are waiting, if already a member, pay your dues, line up your neighbor for a membership and make your plans to attend the Convention together in July—F. A. DOZER, Treasurer, Bucyrus, Ohio.



OUR BOOK SHELVES

"Enlarging On Gaslight Paper"

The *Photo-Miniature* is always good, but this, the last issue, is an exceptionally instructive and informative one. In addition, it is on a subject that is of general interest and therefore of the widest application. It is hard to imagine a worker who cannot make good use of the information contained in this handbook as the superiority of enlargements on gaslight papers, particularly when a near approach to a contact print effect is required, is becoming more general. All dealers carry a supply of the *Photo-Miniature* and it can be secured direct from the publishers, Tennant & Ward, 103 Park Avenue, New York.

"Analysis of Light"

There has just come to our desk a very interesting booklet entitled the "Analysis of Light," wherein is explained that light, which is the main factor in photography, is a chemical "force of nature" and by simple experiment demonstrate what this invisible imponderable force consists of, how it acts, and how it is forwarded through space. Light is always a chemical action, while sound is a mechanical operation, and heat the result of molecular resistance, but the "forces of nature" so called are alike, and are really but one force, whether it becomes manifested into the form of light, sound, magnetism, electricity, heat or life. This accounts for its easy transformation from one form into another. This force is entirely foreign to all elements or matter of any kind; it cannot be incorporated into any of its parts or branches, therefore it cannot be started as corpuscles,

air waves, nor set in vibrating motion, as claimed by the theories on light and sound. We have here a force, which, once created, is indestructible by reason of the fact that it consists of nothing but the unequal condition of matter; it can be transformed from one form into any other, and can travel any distance, or may linger at matters for centuries, but it is sure to re-establish that equilibrium until every part of the force is used and neutralized. The booklet explains how the solar force is applied to rotate the earth, heat and magnetize it, causes the trade winds, windstorms, earthquakes, volcanic eruptions and all other phenomena due to sunlight. The price is seventy-five cents, postpaid, from the publisher, Charles M. Rousseau, 1660 Sacramento Street, San Francisco, California.

"The Fox Terrier"

The above is the title of the latest addition to that excellent series known as the "Outing Handbooks." The author, Williams Haynes, treats most entertainingly and instructively what we can safely call "The Best Known Terrier," devoting a chapter to both the smooth and the wire-haired kinds. Other chapters are devoted to the terrier's education, his health, diseases and remedies, the science of breeding, and a final chapter on shows and show dogs. Strange to say, the book is a most entertainingly written one, reading more like an enjoyable tale than the valuable manual that it is. It is uniform with the rest of the Outing Series, published by the Outing Company, 141-145 West Thirty-sixth Street, New York. Price, seventy cents.

NOTES AND COMMENT

**A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest**

That Seventy-five Per Cent Offer

We have intended, from month to month, calling attention to the offer which Mr. Willoughby, of "Willoughby and a Square Deal" fame, has been making his customers. The truth of the matter is that our own appreciation of Mr. Willoughby's universal fair dealing with all his customers has been such that a mention of this refund proposition seemed rather superficial. At any rate, the innovation, and such it really is, consists of his standing offer to repurchase any anastigmat lens or kodak at any time within six months from date of sale, returning to the customer seventy-five per cent of the purchase price; providing, of course, that the article is returned in condition equal to when sold, less the reasonable wear. The reader can appreciate what an offer of this kind means if he will just stop and think. It makes the goods worth just that much more. If one buys an automobile or a piano, he is reconciled to a higher price for a standard make because he knows he can sell it for a much better proportion of the cost price than he can an unknown make. It is the same with goods bought of Willoughby, except that the original cost is no higher than for goods without such a guarantee as this generous one he makes. Write for a copy of the new bargain list, No. 124, he has just issued, addressing Willoughby, Broadway and Eleventh Street, New York.

Well Known Photographer Dies

William Dixon Ball, the well-known photographer of this city, died Tuesday morning, March twenty-fifth, at the Minor Hospital, from spinal meningitis. The funeral services were conducted by the Knights of Pythias, of which order Mr. Ball was a member. He is survived by a wife and two children. Born in Dublin, Ireland, forty-three years ago, he came to America at the age of eighteen. While riding the ranges in Montana, he became interested in photography, which he then made his life's work. He spent a great

deal of time in experimenting, especially in color photography, in which he became an adept. His portraits of children gained him wide recognition.—*Seattle Post-Intelligencer*.

Reported by William Wolff

Mr. Niley has resigned his position with the Northwestern Photo Supply Company to travel the northern territory for the California Card Company.

Ray Winter, with the Multnomah Photo Supply Company of Portland, wants all his friends to know he is growing a Van Dyke.

C. A. Putman now has charge of the photographic department at Meier & Frank's, Portland's largest department store.

The writer has been asked to ascertain why George F. Barden, of the Portland Photo Supply Company, goes to Salem so frequently.

V. R. Trine is now manager of Woodard & Clark's photographic department.

C. E. Clifford, of Wabasha, Minnesota, has purchased the Wilson Studio at Albany, Oregon.

C. A. Lare has opened a beautiful new studio in Eugene, Oregon, calling it the Studio DeLuxe.

Mr. Van Berkilo, formerly of Salinas and other towns, is now at Medford, Oregon, in an up-to-date studio.

Leo Drossel, of the California Card Company, was met in Portland and reported business good.

H. P. Willis, otherwise known as "Smiling Willis," was also in Portland gathering in the orders.

L. W. Marble, of Ashland, Oregon, is not only a photographer, but a maker of fine hand-made furniture. Several pieces shown the writer were beauties.

C. A. Miller, of the Miller Photo Company, of Klamath Falls, Oregon, was found, as usual, fixing his auto.

Hugh Trout, of Salinas, has taken the matrimonial step. We wish the happy couple all joy and success.

NOTES AND COMMENT

1913 Kodak Advertising Contest

In their announcement of the new 1913 contest in which three thousand dollars in cash prizes will be awarded, the Eastman Kodak Company says: "The Kodak Advertising Contests are not for the purpose of securing sample prints. They are for the purpose of securing illustrations to be used in our magazine advertising, for street car cards, for booklet covers and the like.

"We prefer photographs to paintings, not only because they are more real, but also because it seems particularly fit that photographs should be used in preference to drawings in advertising the photographic business. The successful pictures are those that suggest the pleasures that are to be derived from the use of the Kodak, or the simplicity of the Kodak system of photography—pictures around which the advertising man can write a simple and convincing story. Of course the subject is an old one—therefore the more value in the picture that tells the old story in a new way. Originality, simplicity, interest, beauty—and with these good technique—are all qualities that appeal to the judges.

"In addition to the prize pictures we often purchase several of the less successful pictures for future use in our advertising. So it will be seen that in reality our prize money is even bigger than we advertise.

There is a big future for the camera in the illustrative field. There's a growing use of photographs in magazine and book illustrations, to say nothing of the rapid advance along the same lines in advertising work. There's a constant demand for pictures that are full of human interest. Such are the pictures that we need, that others need. The Kodak Advertising Contests offer an opportunity for your entry into this growing field of photographic work.

"The prizes are as follows: Grand Prize Class, open only to professional photographers who have won prizes in professional class in previous Kodak Advertising Contests. Negatives, 5x7 or larger. First Prize \$500.00, Second Prize \$400.00. Total, \$900.00.

"Class A, professional photographers only. Winners in 1907 and in Class A, 1908, 1909, 1910 and 1911 are not eligible. Negatives, 5x7 or larger. First Prize, \$500.00. Second Prize, \$400.00. Third Prize, \$250.00. Fourth Prize, \$150.00. Fifth Prize, \$100.00.

"Class B, amateurs only. Negatives, 4x5 or 3¼x5½ or larger. First Prize, \$300.00. Second Prize, \$200.00. Third Prize, \$100.00. Fourth Prize, \$50.00. Fifth Prize, \$50.00.

"First of all, it should be remembered that these prizes are not offered for the sake of obtaining sample prints or negatives made with our goods. Merely pretty pictures, merely artistic pictures will not be considered. The pictures must in some way connect up with the Kodak idea—must show the pleasure that is to be derived from picture taking, or the simplicity of the Kodak system, or suggest the excellence of Kodak goods. Must, in short, help to sell Kodak goods, by illustration of some one of the many points in their favor.

"The jury will be instructed to award the prizes to those contestants whose pictures, all things considered, are best adapted to use in Kodak (or Brownie Camera) advertising.

"As reproductions of the pictures will often be in small sizes, too much detail should not be introduced. Pictures for reproduction should be snappy—vigorous, for they lose much by the halftone process. Where apparatus is introduced, it must be up to date. If you haven't the goods, you can borrow. It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases special arrangements will be made.

"The jury of award will consist of photographers and of advertising men who are fully competent to pass upon the work submitted. Full attention will be paid therefore to the artistic and technical merit of the work as well as to its strength from an advertising standpoint. Announcement of the names of the judges will be made later."

We ourselves would call special attention to the importance of intended contestants first getting as clear an idea as possible of what really makes a suitable picture for advertising purposes. And above all, do not imagine that something faked up to represent a man falling from the moon, receiving a camera from the hand of a tinsel-winged representation of an angel, or anything of that kind, is going to win a prize. At least we do not think they will. We know of a lot of such efforts that have been submitted in former competitions, yet the published pictures of prize winners have always been of the simplest and most straightforward char-

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acter. We would also call attention to the additional second grand prize open only to those professionals who have won in previous Kodak contests. It would seem that provision is fairly made for all, both previous winners and others.

The terms governing are as follows:

"1. Each picture is to contain a figure or figures and is to be suitable for use as an illustration in advertising the Kodak or Kodak system of amateur photography.

"2. Each print in the Grand Prize Class and Class A must be from a negative 5x7 or larger. Each print in Class B must be from a negative 4x5 or 3¼x5½ or larger.

"3. Prints only are to be sent for competition—no negatives.

"4. Prints must be mounted but not framed. (Mounts should show about one-inch margin.)

"5. No competitor will be awarded more than one prize. (This does not prevent a competitor from entering as many pictures as he may desire.)

"6. Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, but we assume no responsibility of loss or damage.

"7. The negatives from which all prize-winning prints are made are to become the property of the Eastman Kodak Company, and are to be received by it in good order before payment of prize money is made.

"8. Contestants who are awarded prizes must also furnish to us the written consent of the subject (in case of a minor, the written consent of a parent or guardian) to the use of the picture in such manner as we may see fit in our advertising, as per the following form:

".....

"For value received, I hereby consent that the pictures taken of me by....., proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

".....

"I hereby affirm that I am the (parent/guardian) of and for value received, I hereby consent that the pictures taken of (him/her) by proofs of which are hereto attached, or any reproduction of the same, may be used by the Eastman Kodak Company or any of its associate companies for the purpose of illustration, advertising or publication in any manner.

".....

"9. All entries should be addressed to Eastman Kodak Company, Advertising Department, Rochester, New York. Entries from Canada

should be sent to the Canadian Kodak Company, Toronto, Canada.

"10. In sending pictures, mark the package plainly, 'Kodak Advertising Contest,' and in the lower left hand corner write your own name and address. Then write us a letter as follows:

"I am sending you today by (express/mail), charges prepaid,.....prints.
Please enter in your Kodak Advertising Competition. Class.....

"Yours truly,

"Name

"Address

"11. The name and address of the competitor must be legibly written on a paper and enclosed in a sealed envelope in the same package in which the prints are forwarded. There is to be no writing on prints or mounts.

"12. We will promptly acknowledge the receipt of pictures, and when awards are made, will send each competitor a list of prize winners.

"13. Recognized professional photographers, including commercial and newspaper photographers, in short, all persons depending upon the use of a camera for a livelihood, will compete in Class A. Class B is open to amateurs only.

"14. This contest will close November first, 1913, at Rochester, New York, and October twentieth at Toronto, Canada.

The Dealer's Convention

On the evening of Tuesday, March twenty-fifth, the convention held an evening session as guests of the Bausch & Lomb Optical Company. Special cars conveyed the party from the Powers Hotel to the factory on St. Paul Street. William A. E. Drescher made an address of welcome, after which a talk on the Balopticon, its applications and sales possibilities, was given by I. L. Nixon, of the projection department. A talk on photographic lenses illustrated by lantern slides was given by Chester F. Stiles, of the photographic department.

An exhibition of the varied lines of goods made by the company was on display, and included microscopes, microtomes for cutting minute sections, bacteriological apparatus and laboratory supplies for the physicians and the chemists, engineering instruments for surveyors and engineers, military apparatus, including rangefinders, prism binoculars, magnifiers and reading glasses, and various other products.

A very interesting exhibit was a series of lenses showing the different elements of which they are made up. Of course, there was shown a complete line of the projection apparatus and photographic lenses, including

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photomicrographic apparatus, projection apparatus for both transparent and opaque objects in many variations, and a complete line of the Bausch & Lomb-Zeiss Tessars and protars.

After the exhibition a buffet lunch was served, and the guests enjoyed a social time visiting and singing. A few impromptu remarks were made by Edward Bausch, who spoke interestingly of his own and the firm's long connection with photographic problems and the value of all concerned of co-operation between dealer and manufacturer. Mr. Bausch's remarks and the reception accorded him provided a fitting climax to an evening of enjoyment and profit long to be remembered by those present.

Graduation Exercises

On Saturday evening, March fifteenth, the graduating class of the Illinois College of

chosen remarks of welcome and encouragement were given by Mrs. Bissell. Thereafter followed an informal social hour, when every one shook hands with every one else. Congratulations were extended to those participating.

Much pleasant enjoyment was had in viewing the high-class display of portraits, the exclusive work of those graduating. These indeed were creditable and worthy of the best efforts of leaders in the profession and reflect a great credit on the institution.—*Effingham Record*.

New Ansco Catalogue

We have just received a copy of the new catalogue of Ansco cameras, a handsome book of about sixty pages. In it are listed over twenty different styles of hand cameras, including the interesting little Ansco Vest-



GRADUATING CLASS, ILLINOIS COLLEGE OF PHOTOGRAPHY
Top row: Fred H. Nye, Albert Loomis, W. N. Schumacher, Edward S. Bolen.
Second row: T. Kondo, Alice E. Miller, George Wheeler, J. N. Hillhouse, Flora Chilberg, Saul B. Fritz. Third row: Virginia Smith, Alvin S. Keuler, Clyde Walyers, A. G. Penrod, Fannie Chilberg, Florence E. Allen. Fourth row: T. Tonaka, M. Hongue, H. B. Smith, Lewis G. Buldue, C. Chow.

Photography descended the winding stairway of Garnet Hall and entered the beautiful parlors, to the strains of stirring music rendered by Mrs. Charles H. Rohrbach, where the following program was rendered in their behalf:

Instrumental Duet - Miss Levy, Mr. Flugge
Vocal Solo - - - Miss Skinner
Address, Friendship, Superintendent Davis
Vocal Solo - - - Mr. Humphrey
Address, Opportunity - Professor Cook
Vocal Solo - - - Professor Killen
Address - - - Professor Pfingst
Vocal Duet - Miss Skinner, Professor Scott

At the close of the program, a few well-

Pocket camera, a model of neatness and compactness. In addition there is descriptive matter covering the excellent shutters and the Ansco anastigmat lenses that are fitted to the cameras, together with a full list of supplies suitable for the use of hand camera workers in particular and photographers in general. Copies can be obtained from dealers or upon request to the Ansco Company, Binghamton, New York.

No More Over-Exposure

A handsome booklet setting forth the merits of the Hydra plates, together with full working instructions for same, has just reached our desk from the agents. These

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Hydra plates are capable of taking care of excessive over-exposure; and the reader must not understand from this that they are simply of value as a license to over-exposure. While they do permit one to disregard exact exposure and only use care to see that the exposure is surely long enough, their chief value lies in the facility with which they portray scenes containing excessive variations in lighting. The immediate foreground of a picture may be in deep shadow requiring an exposure of several seconds, while the distance may be in broad sunlight requiring only the most rapid shutter exposure. Such a subject is trying, if not impossible of the best results, with ordinary plates. With the Hydra plate, it is only necessary to see that the shadows have sufficient exposure and the peculiar qualities of the emulsion will take care of the excessive exposure given the rest of the view. Write for one of these booklets, they are free, addressing Herbert & Huesgen Company, 456 Fourth Avenue, New York, N. Y.

Tropical Development

The Eastman Kodak Company have just issued an interesting new pamphlet covering the developing of Eastman N. C. Kodak Film, Film Packs and Velox Paper in tropical climates. This interesting pamphlet goes very fully into the most desirable methods of counteracting the effect of tropical climates in the working of these photographic processes that are found so trying where it is impossible to obtain water cool enough to insure successful results working in the ordinary way. Methods are given and formulas for both tank and tray development, where the temperature of the available water may be as high as from eighty to ninety degrees Fahrenheit. No doubt many of our readers have had unpleasant experience working under the disadvantage of high temperature and this pamphlet will prove most interesting and valuable to them. Copies can be obtained from all kodak dealers or a post card request to the Eastman Kodak Company, Rochester, New York, will bring it.

Another Surprise

The "Agfa" folks have a new surprise for the photographic trade. They call it the "Agfa" dividend to their customers. Better send in your request for one if you use "Agfa" products, and if you do not, send anyway, and you will. Simply make a re-

quest for the "surprise," you saw mentioned in CAMERA CRAFT, and address it to Berlin Aniline Works, 213 Water Street, New York, N. Y.

New Graflex Catalogue

Herewith is reproduced the front cover of the new Graflex catalogue, the cut doing little justice to the handsome lithographic colors of the original. Furthermore, the illustration fails entirely to give any suggestion of the wealth of illustrations within, not to mention the information concerning the



principles and action of the focal-plane shutter, together with a full description of the many fine instruments that make up the popular and efficient Graflex line of cameras. These catalogues can be obtained of one's dealer or by applying direct to Folmer & Schwing Division, Eastman Kodak Company, Rochester, New York. Our readers need only make a post-card request, and neglecting to do so is their own loss.

Squirrel Cuts His Hair

Ernest J. Bloom, a photographer of Hood River, passed a couple of weeks at the ranch of R. E. Scott, secretary of the Commercial Club. Mr. Bloom had been working in the garden, and, taking a nap after lunch, a squirrel that had been making its home in

NOTES AND COMMENT

the house, evidently thinking his long, black locks would make an excellent lining for a nest, trimmed off a portion of the hair while he slept. "The rodent's teeth must have been sharp," says the photographer, "for I did not feel him at work there cutting away the hair. I must have moved in my sleep and in his excitement he evidently pulled some of the hairs out instead of cutting them. This awoke me and I let out a yell that almost frightened the squirrel to death."—*Portland Oregonian*.

The Popular Viopticon

The Viopticon, the instrument which caused so much interest at the recent Photographic Dealers' Association of America convention at Rochester, is meeting with a phenomenal success. It forms a missing link in connection with the small or vest pocket cameras and kodaks which are fast becoming so popular. It is a well-known fact that the vest pocket camera has many points in its favor, the main one being that less accuracy is required in focusing and exposing. Nothing need be said regarding the convenience of these small sizes over those which are larger and more expensive, while requiring greater accuracy.

The Viopticon is used as an enlarger and projector of contact slides from these small negatives. The process is so extremely simple that even the inexperienced amateur may easily make his own slides and enlargements with complete success, adding three-fold enjoyment and real value to his pictures. For projection, small slides, $2\frac{1}{4} \times 3\frac{1}{4}$, are made by contact from the negatives. Any size image may be secured at any distance from fifteen to eighty feet. The image produced by the Viopticon is very sharp and brilliant, and the surprising feature of its capability as a projector is that there is but one adjustment, that of focusing with the rack and pinion. The lamp house is fixed permanently in one position.

For enlarging, all that is necessary is to insert a ground-glass, furnished with each machine, and place the negative in the position of the lantern slide. Any size enlargements may be made from 3×4 to 14×17 or larger if desired. The Victor electric arc, which enjoys widespread popularity in connection with the Victor Portable Stereopticon, for standard lantern slides, is also used on the Viopticon. Attachment is instantly made direct to any incandescent lamp socket

on any voltage. This light produces sufficient illumination, when enlarging with the Viopticon, to make perfectly timed enlargements on the ordinary developing papers with which the amateur is familiar. Bromide paper may also be used. Where no electricity is available, it may be used with a new acetylene attachment, producing the most brilliant images ever secured with acetylene gas. These convenient, small, vest pocket cameras have been somewhat handicapped in becoming popular because the small contact prints were hardly large enough for practical use. The Viopticon completes the outfit. Full particulars can be obtained by applying to Victor Animatograph Company, 111 Victor Building, Davenport, Iowa.

Those Thin Films

Often the most valued films in the roll are not brought up in development to sufficient density to make good printers. Instead of throwing them away and bemoaning their loss, get a tube of Victor Intensifier from your dealer and let it build up your film to proper printing density. It is inexpensive and very simple to work, as it is a single-solution intensifier.

Albums For Film Negatives

The attention of our readers is called to the advertisement of the Housh Patent Film Albums that appears in our front advertising section this month. The new patent construction means great durability and large capacity, two items of the most vital importance in a device intended for the convenient storage of film negatives in such a form that they can be gotten at with the least possible annoyance and with as great frequency as necessary. Each pocket is numbered and a sticker is provided for numbering each film to correspond. An index completes the filing system. These albums are a saving of time and trouble, as well as wear upon one's films, not to mention the loss or misplacement so frequently experienced when one has no system of keeping all his negatives together and in order. Order one as a sample and you will not be content until your entire collection is filed and indexed. Practically all dealers stock the Housh line and the firm will gladly advise you concerning the nearest one. Address The Housh Company, 7-17 East Concord Street, Boston, Massachusetts.

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An Interesting Announcement

Our advertising section this month includes a two-page announcement that should have the attention of all our readers. This new photographic supply department of the American Photographic Text Book Company starts off with many things in its favor, the handsome and complete catalogue which they have gotten out being a most desirable means of facilitating business. Perhaps the most noteworthy feature will be the technical and service co-operation which the firm will place at the disposal of its customers. No small number of our readers are owners of either the "Complete Self-Instructing Library of Practical Photography" or the "Library of Amateur Photography," which are issued by this firm, and these will know just how high a standard they may expect from the new department that has been inaugurated for the benefit of all users of photographic supplies. Write at once for a copy of this new catalogue, a catalogue that the firm promises will be different from any other. It is sent absolutely free to our readers. Simply send your name and address to American Photographic Text Book Company, 103 Adams Avenue, Scranton, Pennsylvania.

Wonderful Color Photography

The Denver Club Friday night was entertained by an exhibition of Franklin Price Knott's work in color photography. Mr. Knott is a painter who has turned his attention temporarily from the canvas to the new photography. He has just returned from Europe with a collection of pictures declared by many to be the best of their kind shown in this country. In New York Mr. Knott gave an exhibition at Columbia University which excited much comment.

Each picture projected on the screen was from a color positive, 5x7 inches, instead of the ordinary hand colored lantern slide of 2½x3 inches. A painter of training and experience, Mr. Knott has an eye for effect and coloring. He travels over the globe to seek his subjects. These three things make his pictures out of the ordinary. They are truly remarkable in composition and the nuances of color.

Many of them have the artistry of fine paintings. There is a study of an old man taken at Biarritz, which reminds of Rem-

brandt. Another charming and quaint Biarritz scene shows a water carrier filling his barrel from a stream. There are any number of beautiful landscapes in the collection. There is an interior scene taken in the Villa Marie on Lake Como, which is remarkable because of its clearness of detail. Every figure in the magnificent painting on the wall is as plain as the furniture in the room.

Mr. Knott said recently: "As artistic work can be done as in painting. Artists know this, even if they do not always admit it. The work offers so many possibilities. It reproduces nature with an accuracy no painter can ever hope to attain. Of course, it will never supersede painting, since the clever artist will always have his day."

His exhibition at Columbia University aroused so much interest among artists, photographers and scientific men that the faculty asked him to repeat it. He was invited to exhibit at the Colony Club by Elizabeth Marbury, play broker and entertainer to society, and he has also had important invitations to exhibit in London, which he will accept on his next trip abroad.—*Denver Republican*.

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(Signed) FAYETTE J. CLUTE.

Sworn to and subscribed before me this twenty-fourth day of March, 1913.

Sid J. Palmer, Notary Public, in and for the City and County of San Francisco, State of California. My commission expires December thirty-first, 1914.

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

A BIT OF ADVICE

A dabbler in all things is proficient in none, and finds it difficult to strike a foothold in the front rank.

“If I could make

CYKO PRINTS

as good as so-and-so,” a topnotcher in the business, “I would use nothing else.”

This is a remark sometimes made by photographers who use several brands of paper, including platinum.

They never will succeed.

The successful photographer is the one who concentrates on CYKO and learns how to use it.

AnSCO Company

Binghamton, N. Y.



A CHILD'S PORTRAIT
By B. J. NASIEF

CAMERA

CRAFT



A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

VOL. XX

JUNE, 1913

No. 6

Portraiture As An Evening Side Line

By B. J. Nasief



With Illustrations by the Author



TALKING TO MAMMA

NY persons having their evenings at their disposal, who are interested in photography and have not yet tried their hand at home portraiture, are missing a source of both great pleasure and profit. With the improved apparatus now on the market, it is possible to go into the finest homes in the evenings and, without either smoke or noise, secure pictures which it would be hard to distinguish from those made by daylight.

Young men of photographic bent, who, like myself, are engaged in other business during the day, no matter what their occupation, will find in evening home portraiture not only a very profitable side line, but a most interesting and enjoyable recreation.

It will appeal especially to those away from home and confronted with the problem of how to spend their evenings.

The work is pleasant in the extreme, it takes one out into the open air,

affords good exercise and gives a return in cash which is more than a great many other occupations would render for the same time spent.

The Editor has requested that I give him a short account of how I do my work and offer some suggestions which might be of help to beginners venturing upon the same line. I am anxious to oblige him, but am practically a beginner myself, having had only a comparatively short experience in the work. I am therefore jotting down some of my methods of working, with no claim that they are the best, but in the hope that some other fellow who is anxious to try his hand at the same line may receive a few helpful suggestions which will save him a considerable amount of trouble and disappointment.

Nearly every beginner thinks that in order to secure good portraits it is necessary to be equipped with an expensive apparatus, one out of the reach of the ordinary man's purse. He will be surprised to find out what his cheap "rapid rectilinear" will do if it is mounted on a camera with a long enough extension. Furthermore, most cheap lenses of the rapid rectilinear type have a much greater depth of focus than the high-speed, high-priced anastigmats, and I am sure that for flashlight work a beginner will get better results with them than with the latter.

The outfit with which I started work was a second-hand "Korona" camera with a cheap lens working at f-8. The complete outfit, second hand, cost me but fifteen dollars; still, I produced some pictures with it that are among the best I ever took, and compare favorably with others made later with a high-priced lens. I do not mean to discourage any one from getting an expensive lens if he can afford it, but I am sure he will find it wise to first see what his cheap lens will do.

The photographer making sittings at night has his choice of mercury electric lamps or flashlight. I much prefer the latter. With it one can make instantaneous exposures at any time in any place, thus doing away entirely with all posing,—a point of great account when it comes to taking small children. I use an enclosed flashlight exclusively for all my evening work. With it, the smoke nuisance is a thing of the past, the noise is reduced to a minimum—in fact, with the new Victor powder it is barely noticeable at all—and the light is as soft as that of day and much more under control. Furthermore, the whole apparatus folds up into a space almost as small as tripod and can be easily carried around. When going out to make a sitting, I have the camera tripod attached to the camera case by a couple of straps, so that it is possible with ease to carry the flashlight apparatus in one hand and the camera and tripod in the other.

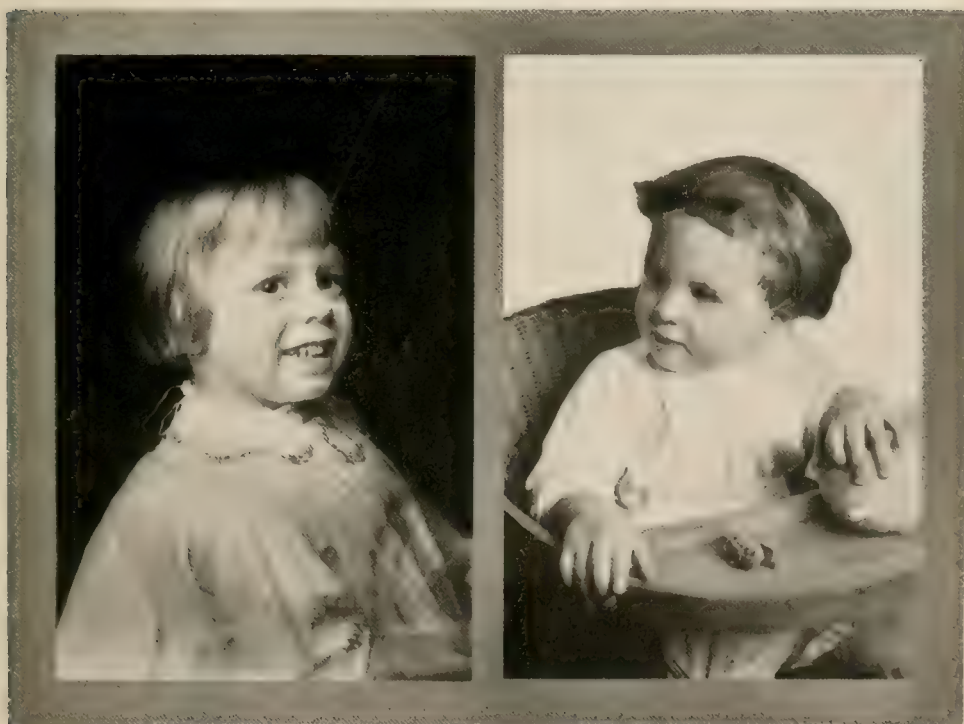
I never do any focusing at all, always making it a point to have my camera set up, the flash loaded, the plate holder inserted, and the slide drawn, before the subject is placed in position.

There are several reasons for this. In the first place, it is always about as uncertain an undertaking to focus correctly by electric or gas light (unless you have your sitter very close to the light, which is seldom possible), as it would be to focus with the shutter closed. Then, also, in making a home portrait it is desirable to show part of the room with your subject in an unconscious position.

PORTRAITURE AS AN EVENING SIDE LINE



AFTER SANTA CLAUS HAS MADE HIS VISIT



THE BACKGROUND REDUCED AWAY

THE BACKGROUND BLOCKED OUT

CAMERA CRAFT

This is almost impossible if they are made to sit still and "look this way" while one gets the focus, and the chances are that one will get a stiff, conscious expression. In photographing little children, it is best to let them roam around the room at will, play with their toys, etc., and then catch them when they have forgotten all about the picture.

Having experienced much difficulty with the problem of focusing, I determined to do away altogether with the dark cloth and ground glass, and accomplish my focusing independently of these. This is easier than it sounds. I simply have the correct position of the lens for every distance from two to ten feet, in inches and half inches, carefully marked, on the camera-bed. This can be done some afternoon when one is free, by tacking the page of a newspaper on the wall and getting the correct focus at each distance from it with the open stop; then all that is needed is a tape measure ten feet long, provided with a metal ring at one end which will slip over one of the posts on the camera front. I have also arranged a very large finder, upon which have been carefully marked the sizes of the different plates used, so that I can tell at a glance, when in actual work, just what the picture is going to include.

A little experimenting will soon teach one just about what distance to place the camera from the subject for any sized picture wanted, when this can be done without the aid of the ground glass. Then, having selected the spot where the picture is to be made, and having decided just what it is to include, the complete apparatus is set up and all the necessary accessories are arranged so as to need no further attention.

All these operations will take quite a little time to complete and this may be used to good advantage in getting acquainted with the children who are to be photographed. I find it a good plan to ask them if they will help me set up the camera and make them feel that it couldn't have been done without their aid. I tell them about the "powder cracker" I have brought up to show them, then place a cap in the flash-lamp and fire it (of course omitting the powder). The cap itself will make quite a flash and the little ones are always delighted and ask for "more." This will do away entirely with their getting startled at the flashlight when it comes. When everything is ready and the slide drawn, I play around with the children until they are in the position wanted, never asking them to stand there, or keep still. It takes but a second to run the tape measure (which is hung to the lens post) between the thumb and finger and bring it up to the child's face, note the number of inches, and set the bellows at the corresponding number on the camera-bed, at the same time centering the figure in the finder. The necessity for bringing the tape measure up to the face may be made the occasion for dropping some funny little remark, such as, "Now let us measure her nose." This will almost always bring a smile, which figures in the picture.

In taking interiors with several figures, such as family groups, in which it is desirable to show a large part of the room, I find it a good plan to use the electric light as well as the flash. With the flashlight alone the chances are that every part of the room, particularly the remote corners, will not receive any too much light and the result will be that the background is too dark. One who has

PORTRAITURE AS AN EVENING SIDE LINE



THE BOOK WITH THE PRETTY PICTURES IN IT



WHITE WINDOW CURTAINS MAKE A GOOD BACKGROUND



SOME FLASHLIGHT PORTRAITS OF CHILDREN

not tried it will be surprised to find how much difference an exposure of ten seconds by the ordinary electric lamps will make when added to the flashlight. Of course this cannot be done with children, but grown persons will have no trouble whatever in posing that long if they are a little distance from the camera and placed in an easy position, such as looking at a book or reclining on a sofa. The only way to take such a picture is to give the time exposure first and finish with the flash. This can easily be done by loading the flash-lamp in the ordinary manner and setting the shutter to "Time" instead of "Bulb."

When about to expose, squeeze the rubber tube which connects the flash-lamp, between the thumb and finger, and press the bulb. This opens the shutter, but does not set off the flash. Now release the tube, and when the exposure of ten seconds has been made, press the bulb again. This sets off the flash and immediately closes the shutter.

Many home workers prefer to carry a portable background with them. I have never done so, as it seems to me that a home portrait should contain as much of the home surroundings as possible, so as to make it appear different from the ordinary run of studio work. One can almost always find an interesting home background without setting up anything artificial. A plain curtain in a doorway between two rooms will serve excellently in taking little children.

Quite a number of pretty effects can be secured by standing the child between the curtains or looking through them. I sometimes suggest a game of "peek-a-boo" through the curtains with my little subjects and catch them with the flash just as they think they have "caught" me.

Another very good background is that of white window curtains a good distance away from the sitter, so as to eliminate most of the detail. The end of a piano with the window curtains at the other side often makes another nice background. The only adjusting that may be necessary in this case is the moving of the piano a little out of its place,—a matter of a few seconds.

My first trials at home portraiture were made with the intention of having

PORTRAITURE AS AN EVENING SIDE LINE



NATURAL EXPRESSIONS ARE SECURED WITH THE FLASH

the pictures look as much like real studio portraits as I could possibly make them. With this idea in mind, I generally made busts and large heads, paying no attention whatever to the background, and then either blocking it out so as to make it print perfectly white, or reducing it locally, so as to make it black. Some of the reproductions herewith show the results secured, but I do not think these flat effects are half as interesting as the interiors of the rooms which give less prominence to the people and show more of the home surroundings, and I have found that the latter are much more appreciated. Furthermore, local reduction of a background is about as "ticklish" a job as a tyro could wish to undertake, and it is best to leave it alone, especially with a negative which is prized.

With one of my first successful child portraits I succeeded in effectually removing the background, but at the same time obliterated most of the child's hair, which was dark and hard to distinguish from what was behind it. This had the effect of making the child appear bald-headed and I had to spend the good part of an afternoon replacing the hair by retouching on the film and placing opaque on the glass side of the negative.

In regard to getting business, my experience has convinced me that there is only one way for the home portrait photographer, and that is by personal soliciting. People have to be shown what can be done at home, and interested in something different to ordinary studio work. When starting in, I spent a considerable amount in advertising, using spaces of various size, from the small classified columns to displayed and illustrated advertisement. The replies were many, but they were almost always from the wrong class of people, those expecting to pay three or four dollars a dozen. Then, also, it would take a whole evening to call on six or eight persons who had sent in replies, since they were scattered over all sections of the city.

At present I employ a university student, a young lady who is working her way and who has the schedule of her studies arranged so as to give her a considerable amount of spare time during the afternoons. She carries a case containing a full line of samples and a supply of neat visiting cards, on which are



ISN'T IT TIME FOR MAMMA TO HELP ME DRESS?

printed simply her full name, and in the left-hand corner the name of the university, such as "Miss Mary Smith, Jonestown University."

She starts in on one street in the residential district and works steadily along it until it has been all covered. By this arrangement I almost always have a number of customers near together and it is often possible to make several sittings in an evening within a few blocks of each other.

She is supplied with a list of names of the people living at each house, copied from the city directory, so that she always knows whom to ask for when the maid comes to the door. If asked who it is that wishes to see the lady of the house, she hands in her visiting card. Being a student, she is almost always admitted and given kind consideration.

A careful record is kept of each customer, and when one names a future date on which work will probably be wanted, such as "When the baby is three months old," a note is made of it and they are called on again at that time.

In every university there are students, anxious to do this kind of work, who are very good at it. Needless to say, it is only fair that they should be well paid for their trouble. I find that one brings in all the work I can handle, but a man devoting all of his time to the work could very likely employ several.

A bit of work of the highest quality is a key to a man's life, because it is the product of that life, and it brings to light that which is hidden in the man as truly as the flower lays bare to the sun that which was folded in the seed. What a man does is, therefore, an authentic revelation of what he is, and by their works men are fairly and rightly judged.—HAMILTON WRIGHT MARIE.

Suggestion As An Art Factor

By A. T. De Rome



With Illustrations by the Author



A FAIR HORIZON

My last article having dealt with elimination of the non-essentials, accent and shape, I will, in this, treat of the power of suggestion as embodied in line, color and texture, as such factors are applicable in photography.

When one comes to realize that every thought is strongly influenced if not the direct result of suggestions made to the mind by some past or present impression, rather than an individual and original creation of the mind itself, then one will appreciate the importance of carefully considering each and every element entering into the composition of one's pictures. The impression to be conveyed, the story to be told, must not be hampered or bound by suggestions that are irrelevant or conflicting. Such suggestions as are made by the tones, the lines, and the textures introduced, must play their definite parts in telling the story. One should carefully weigh the influence of every separate element in the subject matter being photographed, retaining those that help, by suggestion, and discarding or minimizing any that hamper or destroy.

Analyze, with me, this first picture herewith. We realize that the photographer, on a tramp afield, has just come out of a clump or forest of pines. The day is not particularly warm, one of those balmy days when the air is pure and the flowers the brightest; a day such as invites one to take up his camera and hike. Look at this picture for a brief moment, then turn the page and try

and recall all the details your mind pictures as being there. Turn again to the picture, and see if they have all really been included in the composition. You will be surprised to find that they have not. The pine bough merely suggests a forest; in itself it is merely a flat silhouette of twigs, cones and needles, with its beauty entirely in the exquisite tracery of the lines, lines blending into the downward sweep of the entire mass, suggesting weight. The pine is practically the only tree that lends itself to such broad treatment, because the myriad of needles endow the outlines with a softness that is impossible with trees having heavier foliage. I use this particular print as an illustration for the reason that it goes about as far as is safe in the matter of suggestion without danger of appearing freakish or without producing something that is frankly only decorative, only a design.

Turning our attention to the wooded hills and the rocky shore that blends off in the distance, we find that they are merely flat tones, the only accents being those in the waves that break so restlessly on the shore. These are all; a silhouette, some flat tones, and a few accents in the breaking waves. And yet, what a complete story is told, and how harmoniously all the elements assist in conveying this story to the mind of the observer.

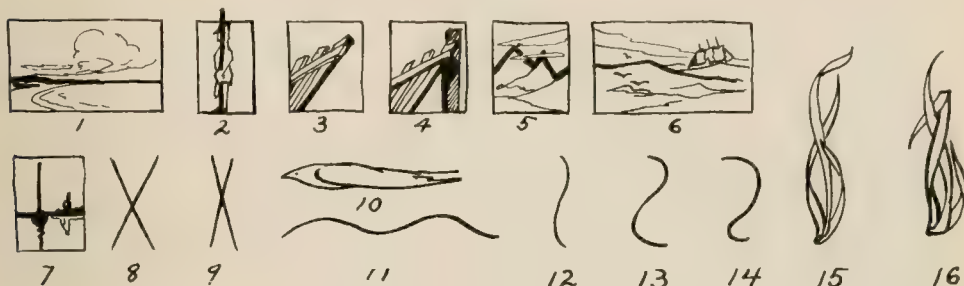
If one will select from among his prints those containing figures in silhouette, that is, figures devoid of detail, he will find that in nearly every case it is quite easy to determine what each figure is doing, fully as well as if every detail were shown. The mind supplies the detail, it reads a meaning into every curve, and that is why the silhouette is so interesting. The mind is allowed play and brings forward its own picture, based on past impressions; pleasurable memories of the past are drawn upon.

The mind abhors interruption, broken thoughts. One quickly loses interest in a speaker whose discourse is rambling, whose ideas seem to jump from one subject to another. Every book must have its major theme, a main thought throughout, and confine itself thereto if the attention of the reader is to be held. The same rule applies to one's pictures; every element included must suggest a continuous thought. The suggestive power of a line lies in its length and breadth as well as its direction. 1—The horizontal line suggests rest, repose, even solicitude. 2—The perpendicular, life, dignity, attention, set purpose. 3—The inclined line conveys an impression of action; and, such a one will attract the attention before either of the others and hold that attention longer and more persistently. The reason for this is the mind unconsciously expects it to move, our minds having been trained, from past experiences, to find such an object falling or rising. 4—When this effect of action is undesired it can be counteracted and destroyed by the simple expedient of giving the offensive line support in the form of a line leaning in the opposite direction, or even some mass of fairly solid shade will answer.

So supported, the line loses its increased interest because it has become fixed and stable, losing its power to suggest action. 5—If it is desired to suggest violent action, the zig-zag line, conventionally used to represent lightning, can be employed. 6—This impression of action is exemplified in the continued sharply ascending curves making up the outline of storm waves, a combination

SUGGESTION AS AN ART FACTOR

of the zig-zag and the curve. Such a line suggests action moving horizontally, while the zig-zag suggests more strongly the vertical form of action. 7—Lines attract the attention in proportion as they approach the right angle when cross



ing each other. Lines forming a cross get the attention before those forming an x for the reason that the former offers the greatest contrast of direction. In the three examples herewith, the first shows two opposites, the second is made up of lines having only moderate contrast, while the last is almost passive in its effect, the lines not being far enough away from the vertical to suggest action as long as each is braced or supported by the other.

As a line becomes curved it takes on the sinuous effect which suggests speed; and the more pronounced this wave effect, the more deliberate does the action become. The vertical curved line gives an impression of grace and mildness, particularly when well balanced by having a larger amount of curve below the center than above. As this amount of curve below the center of the line is increased, the impression passes from one of grace to one of strength. By reversing the situation and placing the major curve above the center of the line it is made top-heavy and weakness results.

One need not look further than the grass at his feet to find perfect examples of nature's most beautiful lines. Study the upward curving of the stem of the nasturtium or the stronger curve of the stem that supports the climbing ivy leaf. If the reader is really desirous of learning from these articles, rather than merely seeking a few minutes entertainment, I would suggest that he go out on the hillside at the earliest opportunity and hold a consultation with the blades of grass thereon. A little time spent there, stretched at full length if he will, will teach the careful observer more than he can learn from many hours of study over a book. He will learn how perfectly each line of every tiny leaf seems to fit in with those of its neighbors. If one leaf be broken down or bent at an awkward angle the harmony is at once destroyed. One should apply this thought to the subject matter of his prints. A wrongly placed line, one out of harmony with the others entering into the same composition, and the effectiveness of the picture is at once destroyed. These lines I have mentioned are the foundation of all others; they can be varied in thousands of ways, each easily analyzed when one has grasped the meaning of these few.

One should not try to apply these principles to the minor parts of a picture before he can look at his picture broadly, seeing only its main lines. The pen



SHOWING THE SINOUS CURVE

lines on the two accompanying illustrations will make it clear as to the lines I mean. I have selected these particular prints because they are extremes, good for nothing else than historical records of the topography of the section shown. Prints worthy of the name of pictures would have these lines no more than suggested. In one there is the violent zig-zag, leading the eye into the distance, suggestive of a hard, rough climb; another shows the sinuous curve, suggestive of climbing, but of a decidedly different kind. While one is rough and rugged, the other is smooth and easy-going. Applying this sinuous line to the reclining figure one still has the same suggestion of ease and comfort. Applying a few of the other lines to the human figure we have violent action, falling, dignity, repose and so on as in the illustrations herewith. Applying the same lines to landscape we get solitude, ruggedness and so on. The first can be a creek as well as a road; the second, waves as well as mountains; while trees as well as a waterfall would produce an expression of dignity.

The suggestive power of color is almost limitless, but I will here attempt to give only the principal ones. The reader himself should be able to supply the variations and reason them out. Taking the refracted light primaries we have red, yellow and blue. Red suggests a warmth, action and life. Yellow gives the impression of thought or light study. Blue suggests a morose, cold character; while green naturally suggests a degree of thought partaking of both of the blue and yellow; or in other words, calculating. Orange suggests a degree of thought midway between action and thoughtfulness, or inspirational thought. To here attempt to touch upon the other hundreds of variations possible would be unnecessary because the principal interest of the photographer in color lies in their representation by tones, with yellow, the lightest, on one end of the scale, and blue, the darkest, on the other; red representing the middle or neutral gray tone.

The photographer who has advanced beyond the black-and-white stage in printing, instinctively chooses a certain color for his print or feels in some way, that it would be better in some particular color or shade. In doing this he is only striving, perhaps unknowingly, to satisfy one of these principles. For

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example: A sunny landscape, or a portrait of a person of a happy disposition, looks best on a warm colored paper. Snow scenes call for paper with a bluish tint; storm scenes or machine shop views satisfy more fully in black and white. Autumn scenes come out best in a warm delicate brown; while misty vistas are more effective in warm gray. In the same way one can express the different character of people by varying the color of the print. Exceptions to these rules are so rare that there will be time enough to worry about them as they are met with. By following out these suggestions on the use of color one will be but following nature's laws of harmonizing everything to the thought to be expressed. Texture is another very important consideration in the print. Large rugged rocks and trees, where not softened by mists, are best expressed on rough paper; while, on the other hand, one should choose a paper with a finer grain for a young girl's portrait, misty moon-rises and like subjects. Where texture plays another important part is in expressing the character of the person or thing.

The rugged rock and the Cypress at Monterey requires a certain amount of sharpness, and so would the portrait of a person with strong vital character. For misty, quiet effects and portraits of mild mannered people, softer effects and even hazy can be used to good advantage. However, I want to warn the reader against getting any feature of the picture out of focus just enough to arouse the curiosity of the observer as to what it is. This great fault kills a great number of otherwise good photographic pictures. Either make that portion of the picture so much out of focus that it becomes a tone, or make it sharp enough to show what it is without intruding itself upon the main thought.

I could write pages upon this subject and then not cover it, so many are the points and illustrations that can be used. But as advised in my first article,



THE VIOLENT ZIG-ZAG, LEADING THE EYE INTO THE DISTANCE

I will only attempt to outline the principles in the simplest possible language. Those who may not thoroughly grasp what has been written should write me, care of CAMERA CRAFT, for further information on any particular point they may desire. In the next article I will attempt to make plain the principles underlying tone values, aerial perspective, vibration, contrast and motion, as these are applicable to photographic pictures.

The Wider Outlook

Behind every trade and occupation there are the most intimate human connections; beneath every trade and occupation there are deep human relationships; and it is only as we discern these fundamental relations and connections that we get at a true conception of the magnitude of the practical activities of society and of their significance in civilization.

The man who treats his trade as mere opportunity of making money without taking into account the service of that trade to men or its relation to the totality of social activities is as truly anti-social in his spirits and methods as an anarchist.

He who is to win the noblest successes in the world of affairs must continually educate himself for larger grasp of principles and broader grasp of conditions.—HAMILTON WRIGHT MABIE.



CONTACT PRINT MADE FROM 5x7 NEGATIVE EXPOSED ONE ONE-HUNDREDTH OF A SECOND AT F-6.8, FOCUS SET AT 20 FEET.

Little Cameras and Big Cameras

By Charles F. Rice



With Illustrations by the Author

Little cameras will produce just as good pictures as big cameras—only smaller.

Excellence of results is independent of size. It isn't always the biggest head that contains the keenest brains, nor the biggest watch that is the most accurate time-keeper. But as regards cameras a different idea has come to prevail, an idea that associates extra fine pictures with bulky photographic outfits, because these instruments are generally equipped with high-class lenses, finely adjusted shutters and various other fittings that make for excellence of results, the same idea connecting little pictures of indifferent quality with the tiny toy cameras sold for a dollar or two and fitted with a fifteen-cent lens, because such has until recently been the general equipment provided with very small cameras.



AN ENLARGEMENT FROM A BEBE NEGATIVE THAT WAS EXPOSED ONE ONE-HUNDREDTH OF A SECOND AT F-6.8, FOCUS SET AT TWENTY FEET

CAMERA CRAFT

Twenty-five years it must be since I got my first camera. It took a picture about $2\frac{1}{2} \times 4$. From that I graduated to a 4×5 , then to a 5×7 , and finally I reached the climax of my ambitions with an 8×10 view camera, which, believe me, is a load for a horse. It was a long jump backwards, as regards size, but I believe it was really a decisive step forward in many ways when my 8×10 was succeeded by a little miniature camera that takes a picture less than 2×3 inches.

"Miniature" is a word I use here in place of the more common term "vest pocket" as applied to the very small camera, not because there is any doubt about their fitting the vest pocket, but for the reason that "miniature" more nearly expresses the idea of compact excellence that is embodied in the best little cameras of today.

The high-grade miniature camera is a growth of the past few years. Not long ago I stood in front of the display window of a New York camera house which makes a specialty of importing high-grade outfits. The whole window was full of different types of miniature cameras—all with anastigmat lenses, high-speed shutters and various other refinements of adjustment that a few years ago were limited strictly to big professional cameras. And the dealer assured me that the demand for such outfits is growing rapidly.

Enlarging—the process of making large prints from small negatives—is the key to the little camera's advantages. So easy and inexpensive has the process of photographic enlargement become within the past few years that what was once strictly a professional branch is now practiced with ease and certainty by the amateur—either with no apparatus at all, beyond his own camera and a darkened room, or with one of the many inexpensive enlarging instruments that are now available. Either daylight or artificial illuminant may be used. With the latter, bromide paper is usually the medium employed because of its speed. Daylight makes possible for enlargement the use of "gaslight" papers; of which Velox and Cyko are representative brands. Gaslight paper gives qualities of depth and sparkle to an enlargement equal to that of a contact print—qualities that are more or less lacking in the usual bromide enlargement.

Gray, flat effects that are generally characteristic of enlargements on bromide paper have led to the supposition that it was impossible to get the depth of tone in an enlargement that the contact print has—the rich shadows, the sparkling highlights. So the amateur, thinking that the only large prints he could produce with a little camera were the gray, lifeless kind given by bromide enlarging, has had good reason to prefer a contact print when large work was wanted, even at the added cost of the large camera, lens and plate. But the use of gaslight papers for enlarging gives this desired "contact" quality. Gaslight paper requires a longer exposure than bromide, but not long enough to be a serious drawback. I use gaslight paper altogether for enlarging, with daylight as the illuminant; and on a fairly bright day my exposures do not average over two or three minutes. Even shorter exposures are possible with electric light if your enlarger is fitted with an arc lamp.

Working conditions for enlarging may be obtained for one cent—the price

LITTLE CAMERAS AND BIG CAMERAS



A HALF DOZEN OF THE MINIATURE NEGATIVES THAT MAKE MOST EXCELLENT ENLARGEMENTS

of a postal card addressed to the makers of enlarging apparatus advertised in this and other photographic magazines—directions that are more detailed than can be given in an article such as this. I would emphasize this point, however, that it is important in enlarging with gaslight paper to keep the negative thin and clear. That result is secured by cutting short the development of the plate or film. A negative that has the merest shadow of an image—providing that quality comes from short development, and not from under-exposure—will yield most beautiful enlargements on the contrast grade of gaslight paper. And, of course, it goes without saying that a thin negative will require less exposure in making the enlargement, and will thus compensate to a large degree for the slower speed of gaslight paper as compared with bromide. Development of gaslight paper enlargements is in no way different from the development of contact prints on the same paper.

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An album of diminutive prints has a charm all of its own. So has a collection of postage stamps. But the pictorial and illustrative possibilities of a print are not fully realized if it is so small that the naked eye cannot discern all its details easily. Thus $3\frac{1}{4} \times 4\frac{1}{4}$ is about the minimum size print for mounting in an album, and 5×7 is as small as will show to advantage when hung on the wall.

Five-by-seven is by no means the limit of satisfactory enlargement from negatives such as the modern high-grade miniature camera produces. Witness the extreme magnification in the popular moving pictures, which are projected to a size of eight or ten feet square from an original film that is scarcely as large as the negative of the miniature camera. Of course, a lack of detail that would not be noticed in a picture seen from a distance, as is the moving picture or stereopticon view, might easily be sufficient to mar a picture intended to be held in the hand. But it is safe to say that a negative, no matter how small it is, that is sharp enough to throw a satisfactorily distinct image on a screen whose dimensions are reckoned in feet, is sharp enough also to make an enlargement up to 5×7 inches, that will pass for a contact print. If it "passes" for a contact print, your little camera has accomplished as much as a 5×7 could.

Results are what count. The man who is after good pictures will be satisfied with nothing short of that. If to get what he is after it is necessary to burden himself with a large heavy camera, then that is the sort of equipment he will take. But if as good results can be obtained with a smaller, less burdensome outfit, then surely it is the little camera that will be chosen; and, still measured by results, he will take the smallest and lightest camera he can find. This does not refer particularly to such work as studio photography, where the camera stays in one place and the subject comes to it. But wherever the camera must be taken to the subject, and the farther the camera has to be carried, literally carried, in the hands or pocket, the more do arguments of bulk and weight count in favor of the little camera.

Extremely sharp detail is necessary in a negative from which greatly enlarged prints are to be made, unless, as is sometimes the case, a certain amount of diffusion is desired in the finished result. In the process of enlargement we can make as fuzzy a print as we want from the sharpest possible negative by simply throwing it out of focus, and that is one advantage that enlarging has over contact printing; but then we generally want the "fuzziness" to be evenly distributed throughout the picture, we don't want it to be fairly sharp in the center and blurred around the margin.

An anastigmat lens or the use of a small lens aperture is necessary to secure evenly distributed sharpness of detail in the small negative. And when I tell you that even a rectilinear lens will scarcely give as well defined an image at f-22 as an anastigmat will at its full opening of f-6.8 or larger, you will grasp the immense advantage of the anastigmat as regards speed; for the stop f-6.8 allows twelve times as much light to pass as stop f-22. An anastigmat lens is more necessary on a miniature instrument than it is on a larger camera; for the larger camera is ordinarily used with a tripod, so that the small lens open-

LITTLE CAMERAS AND BIG CAMERAS



EXACT SIZE OF HEAD TRIMMED FROM 5x7 ENLARGEMENT FROM ONE OF THE SMALL NEGATIVES SHOWN ELSEWHERE.

ing and the longer exposure its use necessitates may be employed without inconvenience. But for use in the hand, our camera must have a lens that will allow of instantaneous exposure under ordinary light conditions. One twenty-fifth of a second is about as long an exposure as most people can give and be sure of holding the camera steady enough, and one twenty-fifth of a second at f-11 is barely sufficient exposure to get shadow details in an outdoor subject with such light as we will say would prevail at mid-afternoon on a bright September day. F-11 with a rectilinear lens will give very fair detail for a contact print, which is the kind of print one would probably want from a 5x7 negative; but this stop in a rectilinear will not give sufficiently sharp detail

except in the very center of the negative to stand any great degree of enlargement. That is why we say an anastigmat is more necessary on a little camera whose negatives are to be enlarged, than it is for a large camera whose output is mainly contact prints.

"It's all in the lens" is the slogan of a well-known camera house. The lens is of prime importance, it is true, but there are other things that count and without which the most perfect lens would be of no avail. And just as it is more important for a little camera than it is for a big one to have a high-grade lens, so it is quite as essential that the little instrument should be put together right. Range and precision of shutter adjustment should be as great for a little camera as for a big one. Its finder should include just that part of the view that will appear on the finished negative; no more, no less. When the camera is extended, the front part which holds the lens should be exactly parallel with the film surface, and at just the right distance therefrom to insure a sharp picture; one not merely sharp, but with critical, needle-like definition; for remember that the original picture is to be greatly enlarged, and if your enlargement is going to stand the test of looking like a contact print, the negative must contain detail so fine that the eye cannot see it all.

As important as anything is an accurate focusing scale, for what profiteth it a man to set the indicator at "ten feet" and find objects at that distance out of focus in the picture. Some miniature cameras have a ground glass for focusing, but the detail is so very fine that the unaided eye cannot tell positively by examining the image on the ground glass whether it is in focus or not. If the focusing scale and finder are accurate there is no need for ground glass focusing, especially on a camera that is mostly used in the hand.

"Universal focus" is a delusion and a snare. You can take a picture through a pin-hole, without any lens, that will be truly of universal focus; that is, near objects and far objects in the picture will be equally sharp. But lenses don't work that way. Any lens set so that objects, for instance, ten feet away will be in sharp focus, will give less distinct definition in objects that are nearer or farther away than ten feet. Of course, the shorter the focal length of the lens is, and the smaller the relative aperture employed, the nearer we do approach a practical "universal focus"; that is, for purposes of contact printing. But no matter how small your original negative is, if the enlargement is going to be as large as 5x7 inches it will be practically as necessary for the little camera to have a focusing adjustment as it would be for a 5x7 camera.

The European manufacturers have taken the lead in developing the high-grade miniature camera. The *British Journal Almanac* for 1913 contains the advertisements of no less than fourteen different makes of such cameras. The standard size picture they take is expressed in centimetres, 4½x6, which equals approximately 1¾x2¾ inches. All these various models are regularly fitted with anastigmat lenses working at f-6.8, f-5.6, f-4.5, and some at the exceedingly large relative aperture of f-3.5. They have compound or focal plane shutters capable of high speed, one focal plane shutter being advertised to give exposures of 1/2500 second; and, what is full as important as high speed, they are also adjusted for slow snaps like 1/10 and 1/15 second. One or two models

LITTLE CAMERAS AND BIG CAMERAS



A GROUP OF THE MINIATURE CONTACT PRINTS, SEVERAL OF WHICH ARE SHOWN ENLARGED HEREWITH



ENLARGEMENT FROM BEBE NEGATIVE
ONE-FOURTH SECOND, F-6.8



CONTACT PRINT FROM 5x7 NEGATIVE
ONE-FOURTH SECOND, F-6.8

CAMERA CRAFT

have vertical and horizontal movements of the camera front, all have focusing adjustments, and a choice is offered by several makers between plates and roll film. Almost any of the plate cameras are adaptable for film pack.

An advertisement of the Ica miniature cameras in *CAMERA CRAFT* attracted me to the show-rooms of the American agents in New York City, where I had some difficulty in deciding what particular model to choose from a large line of most excellent little cameras. My choice was finally the Bebe. Several of the pictures illustrating this article were taken with an Ica Bebe, $4\frac{1}{2} \times 6$ centimetres, fitted with a Zeiss-Tessar lens, f-4.5, of three inches focus. Other illustrations were made with a similar camera having an f-6.8 lens. All the pictures, however, both large and small, were taken at a uniform opening of f-6.8, for purposes of comparison.

A significant fact, or so it seems to me, is that the majority of these modern miniature cameras are primarily intended for the use of plates. This is significant of two things; first, that the photographer who is after particular results prefers plates to films; second, that the arguments of bulk and weight which count against glass plates in general lose much of their force when a box of a dozen plates is so small and light as to be comparable to a box of matches. Even so, no one can gainsay the convenience of film, particularly in loading and unloading, and the fact that it is non-breakable.

"Little cameras will produce just as good pictures as big cameras—only smaller," was the way I started off this article. My camera has proved that to me, and more, that these little pictures enlarged are as good as large prints by direct photography with a large camera. The only essential is that the lens and other equipment of the little camera shall be of as good quality and fitting as



ENLARGEMENT FROM BEBE NEGATIVE
ORTHO PLATE, TWENTY SECONDS, F-6.8



CONTACT PRINT FROM 5x7 NEGATIVE
ORTHO PLATE, TWENTY SECONDS, F-6.8

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A GROUP OF BEBE MINIATURE PORTRAIT NEGATIVES, ALL SUITABLE FOR ENLARGING TO 5x7 OR LARGER

those of the big camera. That much I was sure of, before I attempted to tell others so by writing this article. The teacher often learns more himself in teaching others. Thus, in preparing the comparative illustrations for this article, I proved to myself an important fact, that the short-focus lens has an *actually* and not merely a *relatively* greater depth of focus than a long-focus lens. Why it is so I will not attempt to say; it doesn't seem as if it ought to be, and yet the fact remains, and the illustrations show, that a 5x7 enlargement from a negative taken with a three-inch lens at f-6.8 will have greater depth of focus than a 5x7 contact print from a negative taken with a seven-inch lens at f-6.8. For instance, in photographing, as I recently did, a vase of carnations, with the seven-inch lens at f-6.8, and the flowers only three and a half feet distant, it was absolutely impossible to get all of the subject in focus. Either the nearer blossoms would be sharp and the farther ones fuzzy, or vice versa. But the three-inch lens, at the same distance, with the same relative opening, rendered the whole bouquet in sharp focus. This leads me to express the idea that some

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ENLARGEMENT FROM MINIATURE NEGATIVE CONTACT PRINT FROM 5x7 NEGATIVE



ENLARGEMENT FROM MINIATURE NEGATIVE
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CONTACT PRINT FROM 5x7 NEGATIVE

LITTLE CAMERAS AND BIG CAMERAS



ENLARGEMENT FROM BEBE NEGATIVE
ONE-FOURTH SECOND EXPOSURE, F-6.8



CONTACT PRINT FROM 5x7 NEGATIVE
ONE-FOURTH SECOND EXPOSURE, F-6.8



ENLARGEMENT FROM MINIATURE NEGATIVE CONTACT PRINT FROM 5x7 NEGATIVE

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time the short-focus lens may be more generally used in studio work, and then even with a very fast lens it will be possible to focus sharply on the nose or eyes without rendering the ear like a bunch of wool. In fact, even now a number of professionals, Dr. Arnold Genthe, for example, do all their portrait work by making small negatives with comparatively short-focus lenses, and make their prints by enlargement.

Economy in the outlay for materials is an important argument in favor of this way of working. Plates or films are bought only in small sizes, at a comparatively small expense. Little scraps of printing paper are big enough for proofs, which will show whether the negative will yield a worth-while enlargement, and the large-size paper is needed only for enlargements.

Greater depth of field given by the short-focus lens as compared with a lens of longer focus, at the same relative aperture, makes the little camera practically a speedier instrument than its big brother with the long-focus lens. We will suppose such a picture subject as a gateway in the immediate foreground, and fifteen feet or so beyond the gateway a group of people standing in the path. The photographer needs to get everything in reasonably sharp focus. To do this with a seven-inch lens, the largest opening he can employ we will say is $f-8$, which requires an exposure of one-tenth second. The camera can hardly be held steady enough for an exposure of that duration, and even if the photographer has a tripod, one-tenth second will be too long to stop movement in the figures or wind-blown shrubbery. The success of the picture is doubtful, very. But with the little Bebe, three-inch focus and stop $f-4.5$, the necessary exposure would be only one-fortieth second; the camera could be safely operated in the hand, the exposure would be short enough to catch ordinary movement, and the depth of field would be sufficient to render the whole subject in sharp focus.

Countless good and interesting picture subjects present themselves when the big camera is reposing peacefully at home. If we have a miniature camera, there is no excuse for us not to have it at hand ready for action at all times, for it is no burden; and then nothing can escape us that is worth photographing. You have no idea what "stunts" are possible with the modern miniature camera with a combination of fast lens, shutter and plate. Indoor snap-shots are easy—anywhere near a window. One man I know of uses a miniature camera for flashlights. He holds the camera in one hand and the flash lamp in the other, and the whole equipment will all go into one pocket with space to spare.

Probably no class of picture making demands a more capable equipment than press photography. And it is a fact that numerous press photographers have discarded their bulky reflecting cameras in favor of the modern miniature outfit.

In conclusion, I think we may make some such pronouncement as this: Little cameras will not only produce just as good pictures as big cameras, but the enlarged print from a small camera will pass for a contact print from a larger camera, with the added advantage of greater depth. And in availability and convenience the little camera is superior.

The Simplicity of Stereoscopic Work

By W. F. Lasby, D. D. S.



With Two Illustrations by the Author

Believing that stereograms, viewed through the stereoscope, give more pleasure than do ordinary views looked at in the usual way, and believing that stereograms may be made, by the use of suitable equipment, as easily and inexpensively as any other good pictures, I was prompted to adopt the following method of producing them.

I have a No. 2 Stereo Hawk-Eye, the most compact camera using roll film for stereo work of which I have knowledge. When traveling, I sometimes carry a 3A Kodak as well, and by a simple arrangement of the stereo camera I use the 3A film in both. I am thus obliged to carry only one size of film, the 3A, six-exposure roll. The 3A spool is obtainable, in a fresh condition, almost anywhere, and this last is a convenience of no small consequence when the carrying of extra baggage is neither easy nor convenient.

To make the Hawk-Eye camera adaptable to the 3A film, I first adjusted its two spool holders to take the slightly larger spool. I then wound the backing paper from a six-exposure, 3A roll onto a spool in the camera, winding it to a position for making the first exposure. Noting the position of the first figure on the back of the paper, I marked it on the camera back; then wound along enough for another stereo exposure, again marking the position of the third figure, continuing in the same way for the rest of the spool, leaving from



PLACID CONTENTMENT. Stop f-8, 1/25 second exposure

CAMERA CRAFT

one-half to three-quarters of an inch unused between each two exposures. In this way one is utilizing the entire film without waste, securing five stereo negatives from the six-exposure roll.

The position occupied by the several figures as they are successively wound into position for the successive stereo exposures being marked on the camera back, the next operation was to cut small openings at these points and cover them with disks of ruby-colored celluloid. This enables one to read the proper figures on the back of the film as it is wound into position for successive exposures; the figures, of course, coming into view at their respective different openings instead of at one single opening as usual. So equipped, when the six-exposure, 3A film has been exposed, one has obtained five stereo exposures that have cost only forty cents, or eight cents each, as against the regular course of six exposures costing sixty cents, or ten cents each. It must also be borne in mind that there is a great advantage in always being able to obtain fresh 3A film wherever one may be traveling; whereas, it may be often quite difficult to procure the more unusual size of $3\frac{1}{2} \times 3\frac{1}{2}$ film regularly used in the stereo camera.

Another procedure that I strongly advocate is tank development of the films, the most simple, satisfactory and scientific method for all-around results that has come under my observation. When the negatives are dry, they should be cut apart and both ends carefully trimmed to secure, later, the proper separation of the two elements. They are then cut apart in the middle and the two trimmed ends brought together; the edges being given a binding of some suitable adhesive paper or tape such as is used on lantern slides. They are then ready to be printed from as ordinary negatives and mounted in one piece. This is very much easier than the using of a so-called transposing printing frame, or the older method of straight printing from the plate or film, to be followed by the cutting apart of the two prints and then transposing in mounting to



LOOKING OUT FROM ICE CAVE, MINNEHAHA PARK, MINNEAPOLIS

PARAGRAPHS PHOTOGRAPHIC

secure the correct position of the two elements. So my suggestions as to making stereograms easily and inexpensively are: Use a compact roll film camera instead of a cumbersome and heavy plate outfit on a tripod; have the camera so arranged as to take 3A film, thereby reducing the expense and insuring fresh film; and tank development followed by transposing of the two ends of the film instead of the finished print, this saving work and annoyance. These things properly done, one will have finished pictures that will later give pleasant reminders of bygone days, and one will also have negatives that are suitable for making contact lantern slides from which may be derived as much pleasure as from the stereograms themselves.



PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—

THE EDITOR.

DOES YOUR VIEW CAMERA LEAK? Set up the camera on the tripod in some place where it can be turned about so that the sun will strike both sides. Close the shutter or cap the lens, remove the focusing screen, put the focusing cloth tightly around the back of the camera and your own head, tucking it well in under the chin. In a few moments your eyes will become accustomed to the darkness; when, by turning the camera around on the tripod, the sun will reach both sides in rotation and any leaks in the bellows will be disclosed by a ray of light. The bellows should be extended as far as possible, as there are sometimes holes in the creases of the bellows that do not permit light to enter except when that particular fold is extended. Small bits of thin leather can be glued over the holes if they are not too numerous.—H. R. H., Illinois.

TRANSFERRING PRINTS TO GLASS: Mix Canada balsam or dammer varnish with an equal amount of turpentine oil, coat the glass with this, and then let it dry until it is quite sticky. This will require five or more hours, depending upon the dryness of the atmosphere. The print should be well soaked in soft water, the surplus water blotted off, and laid down upon this glass, all air bubbles being pressed out from underneath. After drying for at least twenty-four hours, wet the fingers and carefully rub the paper away from the back. With a little skill one can remove practically all the paper, leaving only the film of the print adhering to the varnished surface of the glass. Another coat of varnish will render transparent any small particles of paper

that adhere, giving the whole a finished appearance. The same method can be followed in transferring prints to wood and other services. If the prints are given a bath in formaldehyde or other hardener before being rubbed down on the varnish, there will be less danger of tearing the film when rubbing away the paper.—C. F. Walker, Minnesota.

PLATES WITH METALLIC STAINS: Old plates that have been in stock too long or the use of a developing solution that is loaded with silver compounds from previously developed plates, will sometimes give one negatives having a metallic-like stain around the edges and perhaps well in towards the center. These stains can be removed by soaking the negative in a solution made by adding two grains of potassium ferricyanide to each ounce of water. The solution should not be allowed to act for more than two or three minutes unless the film is quite hard and dry from age. Finally wash well and dry as usual.—M. F. Godfrey, Illinois.

HOW MUCH BROMIDE TO USE: We all know that the addition of bromide solution to our print developer tends to keep the whites clear, but we also know that adding enough gives greenish tones that are far from pleasing. The question then arises, Just how much should one use? To find this out in the easiest possible manner requires but a few minutes' time. Cut a strip of the paper being used and insert one end in the measure of developer for the time required to develop a print on that particular paper. Upon withdrawing the strip, fold the end back upon itself so that the emulsion side comes against the back of the strip. If the emulsion side that has been in the developer is as clear as the back of the paper, enough bromide has been added. If not, more is necessary; and, after the addition, the other end of the strip can be used for another trial.—C. B. G., Ohio.

A GOOD INTENSIFIER: Make up one solution by adding eight grains of nitrate of uranium to every ounce of water, and another by adding the same amount of potassium ferricyanide to a like amount of water. Then take equal parts of these two solutions and to each ounce of such mixture add two drachms of glacial acetic acid. If the negative to be intensified is old and dry, it should be first well soaked in water. Placed in this solution, it will gradually take on density until the desired strength is reached, when it should be well washed and dried as usual.—L. H. Breason, Washington.

MAKING PAPER NEGATIVES FROM PRINTS: I recently purchased a lot of old photographs, among which were a few that I desired to duplicate. As they were on albumen paper, the paper was quite thin and structureless, and this gave me an idea that I could perhaps wax them from the back, remove the surplus wax with a hot iron and blotter, and then produce new negatives by using these as negatives in printing. The plan was tried, the waxed prints being placed in a printing frame fitted with a clean glass, and on it an unexposed plate. A short exposure to the side door of my dark-room lamp was sufficient exposure, and development of the plate resulted in a negative almost as good as an original. In fact, prints from this negative on paper with a slight matt surface appear perfectly sharp and are much more pleasing and satisfactory than the original one on albumen paper.—G. B. Owens, Maryland.



CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

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What Is The Answer?

There is one thing this poor editor would like to find out. He is absolutely unable to even venture a reasonable guess as to the whyfore of the seeming lack of consistency on the part of his readers. He receives a number of letters from them suggesting that Mr. Steadman, in his series of articles, did not make everything absolutely clear; some even going so far as to intimate that the reason for his not doing so was a fear that the sale of his little "Exposure Method" booklet might suffer. These letters caused your editor considerable concern, although he wrote a large number of replies explaining that Mr. Steadman was too kindly disposed to intentionally fail to satisfy every reader, and that he, Mr. Steadman, was not influenced in the least by any consideration of the matter of sales. The series of articles came to an end as far as the promised subjects were concerned, but an offer to answer any and all questions in additional articles was made. True, a few queries were received, but not one-tenth the number that the editor's concern over the previously made complaints seemed to assure. What was the reason? Again, the editor is periodically bombarded with suggestions that a department of criticism should be conducted in our pages. There seems to be a crying need, and the editor is more than troubled because he has no entirely fitted person upon whom he may call for such matter as really helpful criticism of an authoritative character. Then Mr. DeRome starts a series of articles in our pages and virtually offers to show any reader wherein his pictures may be at fault if such readers will but send prints to him, in care of this office. Of course, some prints have been received, but the number is far short of what should be expected. Where are all these readers who demanded a print criticism department? And so the case stands in a number of other instances. It is not at all unusual for an article in our pages to close with the statement that the author will be pleased to hear from any reader interested, yet only a few letters come to hand. What is the answer? Why is it so? What can the editor do to overcome this seeming disinclination on your part to avail yourselves of these opportunities placed at your disposal? This lack of appreciation, apparent lack of appreciation, must be rather disappointing to our writers who so kindly make these offers to consider requests for assistance. We really find it necessary, much to our own dislike, to advise them that the scant attention given their kind offer is by no means to be interpreted as a lack of appreciation on the part of our readers. It is just their way of doing things, or rather, their way of not doing them. One reader, recently questioned on the subject, said the reason he did not send

in a few questions for Mr. Steadman or send a few prints to Mr. De Rome was because he supposed everybody else would do so and the desired result be secured. Can it be possible that all our readers have that idea? If you have, kindly discard it. Just imagine that none of the others are doing as we request and send in your own question or print, as the case may be. Any time that the responses become so numerous that they are burdensome it will be an easy matter to ask for an abatement sufficient to allow us to catch up. And having to do that would be a most enjoyable experience, one that would give both our contributors and the editor a large measure of joy over the interest displayed.

A Correction

Mr. Bielawski, the author of the excellent article on "Artistic Gray Effects," in our April issue, is entitled to an apology from our printer for the mistake made in spelling his name wrongly in all three of the places where it appeared in that number. Mr. Bielawski's work is so well known locally that the mistake robs him of no credit; but the error is one that we nevertheless regret most deeply.



"The Fuzzies"

An Epic(?) Concerning the Nude in Photography

Respectfully Dedicated to Our Artist Friends,
By the Author

I got the February "Craft";
I glanced within and laughed, yes, laughed,
And wondered were I going daft;
I did, believe me.

I revel in the "Nude in Art"
Or Nature either. For a start,
I've seen of such a goodly part;
I'll not deceive ye.

Anatomy was once a bore;
But, now I've reached my second score,
I've studied it a d****d sight more
Than e'er in school.

When "Woodland Dryad" first I saw
(Such things should be against the law),
I very nearly cracked my jaw,
It was such drool.

A smooch of brown, a blotch of light,
A weasened, hazy, misty wight,
Caught unawares some stormy night,
And called a "Dryad."

Then "Supplication"; holy smoke!!!
This title surely is a joke.
Blind staggers was the name I spoke;
Impression I had.

"In Nature's Playground"—just a child,
Some trees, some grass, a vista mild.
Where *Nature plays* she just runs *wild*
And raises Hades.

"Landscape" is next. 'Neath stormy skies,
A grotesque, squirming forest lies;
A vision caused by eating pies
(Or tremens, maybe).

"An outdoor portrait." Hully gee!
Can such a thing a portrait be?
A ruined plate, it seems to me,
Which should be shattered.

"The Cloistered Way." Now, are you sure
It is not "scrambled?" It is poor.
Perhaps you think I am a boor
'Cause I've not flattered.

THE PHOTOGRAPHERS' ASSOCIATION OF AMERICA

"The Sunbeam's Path." A mop of hair,
A skinny arm, a leg, and there—
A nude! Not nude; just simply *bare*.
There's no excuse.

And "Fear." A fearful thing, I wot,
For one to tie in such a knot,
From colic, cramps, or God knows what.
Oh, what's the use?

"The Nymph" is Kiplingesque in tone;
She has the hank of hair, the bone,
And in her hand the rag (or stone).
She fills the bill.

"A Lonely Naiad." Take from me,
I think she's lucky to be free.
Now, tell me, do you disagree?
"Ain't she a pill?"

And this is ART! (God save the name.)
Which bringeth honor, glory, fame;
Which ne'er again will seem the same,
Since I have seen it.

Such Art as this you should deride;
It never should be dignified.
The "artist" failed whene'er he tried.
I really mean it.

Now, Fayette, take a fool's advice;
Such things are neither "art" nor nice;
They're simply "amateurish vice"
Reduced to print.

Vagaries of diseased brain;
A brain of storm, a brain of strain.
Why should you cause us so much pain?
Please take the hint.

The "Nude in Art," for strength, depends
On boldness. Lines and curves and bends,
Clearly defined. Softness but lends
A sense of shame.

The model hides her face, and shows,
By that same hiding, that she knows
Perchance some of her friends or foes
Might learn her name.

True art would never hide its face.
A model never feels disgrace
When artists line the form or trace
The figure's curves.

For, when she hides her head in shame,
It cannot be true art. The dame
Knew it was wrong, and by this same
Gets on my nerves.

For "Camera Craft" I always root.
Now, I suppose, my old friend Clute
Will buy a gun and come to shoot,
By George! (L. Holmes.)



The Photographers' Association of America

The plans for the Thirty-third Convention of the National Photographers' Association, to be held in Kansas City, July twenty-first to twenty-sixth, inclusive, are progressing nicely. There is every assurance that the 1913 Convention will be one of the best ever held by the Association. The Executive Board will have decided that the leading feature will be a working studio, in full operation, and under the directions of talented American photographers. Here will be presented an opportunity for one to see how leading lights of the profession handle their work in all departments. The Board feels particularly favored in having for the head of this studio our old and tried friend, Daddy

Lively, of the Southern School of Photography. Associated with him in the reception room will be corps of experienced lady receptionists under the supervision of the Woman's Federation and their President, Miss Katherine Jamieson.

George Graham Holloway, one of the real live wires of the profession, will have entire charge of the operating and retouching departments. He is now making arrangements to secure the very best workmen known to American photography to demonstrate their methods of handling subjects. Arrangements will be made to comfortably seat five hundred, so that every one can see and hear everything that is being done in this room.

Artificial light will be used. The negatives will be retouched and backgrounds worked in, and later thrown up on the screens, while full instructions as to the means and methods employed will be given. One of the most competent men in this country will be secured for this work. In the printing department, Frank W. Medlar will be in charge with four printers of national reputation continuously demonstrating the proper methods of printing and masking. A demonstration of air brush, wash drawing and finishing, by the best artists procurable, will follow. The large Convention Hall in Kansas City makes it possible to put on this feature for the first time. Such an undertaking has heretofore been impossible, owing to the limited floor space. No long, tiresome lectures are being planned. Later announcements will probably reveal the fact that there will be but four lecturers, but these of the highest type in their particular line; one on business organization, one on advertising, one in the interests of the Commercial Federation, and one for the Woman's Federation.

The above is a mere outline of the many things that are being prepared to interest the live, wide-awake photographers who will attend the Kansas City Convention. The usual features will be better than ever. The exhibits will be under the management of Manley W. Tyree, assisted by Will Towles. Mr. Tyree will also have charge of the Congress and every effort will be put forth to make it more interesting and profitable than ever before. Entertainment will be in charge of the splendid local committee at

Kansas City. Much has already been said of their plans and much more will be revealed later. The Woman's Federation will provide its usual interesting features under the management of their enterprising efficient corps of officers. The Commercial Federation is preparing to spring a surprise. Its president and secretary are now working to secure material which will be of great value, not only to the commercial photographers themselves, but as an uplift to commercial photography as a business.

Are there questions arising in your daily business that you would like to have answered by competent men? If so, come to the Kansas City Convention. Are there questions concerning your methods of handling customers that you would like to talk about with the best receptionists in America? Is there anything you want to know about lenses, background work, wash drawing, masking, printing, retouching apparatus, style of mounting? If so, come to the Kansas City Convention. Lay your plans now. Advertise that your studio will be closed; that you are going to the convention to get new ideas. To avoid the rush, send your dues in advance to L. A. Dozer, Treasurer, Bucyrus, Ohio, who will send you a receipt and one of the most beautiful buttons ever issued by the Association. The manufacturers' and dealers' displays will eclipse all previous conventions, and floor plans for these friends will be supplied by Secretary Homer T. Harden, of Wichita, Kansas. No photographer in America can afford to miss this, the greatest of all Conventions.—C. F. Townsend, President, P. A. of A.



Camera Club of Cincinnati

The newly organized Camera Club of Cincinnati, at their semi-monthly meeting April thirtieth, at club rooms in Y. M. C. A. Building, had a most interesting and instructive talk by George H. Barnum, one of Cincinnati's foremost portraitists. Mr. Barnum spoke on a few of the artistic principles of photography, followed by a demonstration of a new printing medium, having a celluloid support. Each member was presented with a souvenir print made by Mr. Barnum at the meeting.

The last monthly contest, "Public Buildings," closed April nineteenth, the successful contestants being as follows: First and second prizes, Charles H. Partington; third prize, C. D. Millar. The next contest, ending May seventeenth, has for its subject "Spring-time." While this was only the Club's fourth meeting, it was well attended, the Club already boasting forty enthusiastic members. Preparations are now under way for equipping, in an up-to-date manner, the club room and three dark rooms situated on the fourth floor of the Y. M. C. A. Building, in the very heart of town.—EDWARD A. TODD, Secretary.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

The Hydra Plate and Developer

The *Wiener Mittheilungen* for February contains an article by K. Hauptmann, dealing with some of the history of this plate and developer, and giving some facts in connection with its use. It is pointed out that the principles involved in the plate and developer are a great deal older than the publication a little over a year ago of the mode of preparation by Caldwell, and that it goes back as far as 1881 to the investigations of Abney, followed by those of Lüppo-Cramer and Vogel, and of Eder. It is stated that the developer consists, practically, of a solution of phenylhydrazine bisulphite, and that the development affected thereby is in no sense a true, physical development, but a modification of chemical development. The writer points out that in place of this evil-smelling composition, Dr. Stenger has given a formula which is equally capable of developing these plates under all conditions. It is as follows:

- | | |
|------------------------------------|-----------------|
| A. Water | 340 cubic cent. |
| Hydroquinone | 5 grammes |
| Sodium sulphite crystals | 50 grammes |
| B. Water | 500 cubic cent. |
| Potassium hydrate . | 40 grammes |

For use, take 66 cubic centimeters of A, 33 of B, and 10 of a ten per cent solution of potassium bromide. So far as the plate is concerned, Dr. Stenger states that the same results are obtained by bathing an ordinary plate with a two per cent solution of sodium nitrate or a two per cent solution of hydrazine sulphite. The first is said to be the most satisfactory. He claims this gives better results than the hydra-plate and requires a shorter development.

The Electric Pocket Red-Lamp

Many amateur photographers will soon be considering where to spend a winter holiday, and of these a great number will no doubt be in the happy position of having a photo-

graphic dark-room at their disposal for a few pence, in which to change plates and make trial developments. Those who journey into the country with the camera are generally far away from such a convenient and necessary luxury, and must utilize existing dark cupboards, corners under steps, usually found in most rural dwellings.

The inconvenience of fitting up a temporary red lamp to burn a candle or lamp oil usually makes the fingers in such a dirty and greasy state as to be unfit to handle the exposed plates in the slides or camera. A suitable lamp that does away with the above nuisances, and one that I have used very successfully, is the electric pocket lamp, provided with a red glass cap. This lamp takes up very little room, does not give off any smoke or vapor, and is always ready for use. Any good shop which deals in electrical fittings will be able to supply you with one at a small cost, with a "stop switch," and from four to six candle power or more if desired. The cap to fit the lamp is made of thin wood; one end to be covered with deep red glass; the inside of this box-form cap it is advisable to pad with black velvet, so as to make a firm fit and trap any stray light. The depth of this cap should be one and a half inches, the rest of the dimensions to be ruled by the size of the lamp.

These lamps will burn continually for a few hours, but always be provided with an additional refill cell in case you run out of power.—E. S. in *Amateur Photographer*.

Deadblack Surfaces

A paper by Dr. W. W. Coblentz in the *Journal of the Franklin Institute* upon the subject of the reflecting power of various substances contains some matters of interest to photographers, inasmuch as various blacks are mentioned together with their reflecting power. The principal black pigments dealt with are lampblack, camphor black, and also soot obtained from a sperm candle and from

an acetylene flame. The last mentioned is apparently the best of all the blacks; as it reflects only from four to eight-tenths of one per cent of the light. Sperm candle black seems to come next and then camphor black, which reflects roughly about one and three-tenths per cent. Lampblack comes highest with a reflecting power of about three per cent. Platinum black shows very variable results, according to the way in which it is produced, while among black materials, our old useful friend black velvet comes out well with a reflecting power of only one and seventy-five hundredths per cent. All things considered, it seems that black velvet is still about the best medium we have for securing a nearly dead black effect. Though some of the pigments also give very good experimental results, none seem to be equally efficient with and without a medium to convert them into a paint, and in photographic apparatus they are of course useless without a medium, and are none too permanent with one. Also, the least abrasion tends to give a shiny surface which is worse than useless. We may add that velvet is most easily made use of when it is mounted on a stiff support. Some should be kept mounted on paper and some on thin card, then whenever a strip is required for lining, say, a lens cap or hood, or a rebate in a camera back, the required amount can be cut off very quickly with a straight edge and sharp knife and fixed up in position with a little seccotine. This adhesive is also the best for the purpose of mounting the velvet. The card or paper can be coated with a thin layer and then the velvet is rubbed down upon it.—*British Journal of Photography*.

Developers for Tropical Countries

The difficulty of obtaining cool developing solutions in tropical countries has led to researches being made for a long time past with a view to consulting developers which, whilst acting at a high temperature, should cause no alteration or melting of the gelatine coating, or appreciable fogging of the image.

Amongst the various methods hitherto recommended, the addition to the developer of substances rendering the gelatine insoluble, such as chromium or alumina salts, could not be adopted, even with non-alkaline developers, owing to the somewhat rapid precipitation of chromium and aluminium sesquioxide by the alkaline sulphite, such

precipitation being immediate in the presence of alkalies, and nullifying the action of the hardening agent.

Bunel has recently recommended the addition of alkaline sulphates to metol-hydroquinone; these do not render the gelatine insoluble, but prevent its swelling in warm developer.

He particularly recommended the use of sulphate of potash and of borax in a metol-hydroquinone developer without bromide but containing acetone in place of alkali.

We found that this solution certainly carried out development without melting the gelatine at a temperature of ninety-five to one hundred and four degrees Fahrenheit, but it acted much too rapidly at this temperature, and produced a somewhat deep fog.

Furthermore, the great volatility of acetone appears to us to prohibit its use at one hundred to one hundred and four degrees.

Our object in the present study has been to determine the best formulas, both for alkaline and non-alkaline developers, by the use of which good negatives may be obtained with development of normal duration at a temperature of one hundred to one hundred and four degrees.

Diamidophenol: With this developer we methodically tested the substances which insolubilise the gelatine and those which prevent its melting in warm water but do not render it completely insoluble.

The former present the inconveniences indicated above in connection with the use of chromium and aluminium salts; also, we have only been able to establish a developing formula, of practical use, with substances belonging to the second category, which, we have recognized, include not only the alkaline sulphates, but also the sulphites. With the use of a sufficient quantity of these substances, the gelatine coating remains unaffected even at one hundred and thirteen degrees.

To avoid introducing a new ingredient into the developer, we first attempted to use soda sulphite in preference to alkaline sulphates, but found that a sufficient quantity to prevent melting of the gelatine could not be used without causing deep fogging, even when using an excessive quantity of alkaline bromide.

A PHOTOGRAPHIC DIGEST

On the contrary, alkaline sulphates, and particularly sulphate of ammonia, gave good results.

With diamidophenol there is no risk from the use of sulphate of ammonia, as Bunel has indicated in alkaline developers, of the formation of dichroic fog, as this fog is due to the presence of free ammonia. Now this alkali is not displaced by the sulphite of the developer.

To obtain an unfogged image at a temperature of one hundred to one hundred and four degrees, the addition of a considerable quantity of alkaline bromide to the developer is essential.

The following formula yielded us the best results:

Water	35	ounces
Diamidophenol	75	grains
Anhydrous sulphite	7½	drams
Crystallised sulphate of ammonia	8	ounces
Potassium bromide	45	grains

This developer gives very good negatives with about three minutes' development at one hundred to one hundred and four degrees.

Metoquinone: With metoquinone the inconveniences attaching to diamidophenol in regard to the use of an excess of alkaline sulphite are not met with. We were able to prepare a good formula for metoquinone developer containing a sufficient excess of sulphite to prevent melting of the gelatine at one hundred and four degrees. We were also able to obtain good negatives, free from dichroic fog, with about three minutes' development, a result we were unable to secure when using alkaline sulphates either with or without alkalis.

We have adopted the following formula:

Water	35	ounces
Metoquinone (quinomet)	75	grains
Anhydrous soda sulphite	6½	ounces
Potassium bromide	38	grains

Metol Hydroquinone: Selecting metol-hydroquinone as the type of alkaline developer, we were able to prepare with this also a formula containing a sufficient excess of soda sulphite to prevent melting of the gelatine at a temperature of one hundred and four degrees.

At the latter temperature, this formula gives negatives equal to those obtained with metoquinone after about three minutes' de-

velopment. The substitution of alkaline sulphates for soda sulphite gave no appreciably better result.

The following formula yielded the best results:

Water	35	ounces
Metol	23	grains
Hydroquinone	23	grains
Anhydrous sulphite	6½	ounces
Anhydrous soda carbonate	2½	drams
Potassium bromide	28	grains

Pyrogallic Acid: Pyrogallic acid may be used as a developer in tropical countries without any supplementary addition of sulphite or alkaline sulphate. By slightly modifying the usual formula, a developer may be obtained which at one hundred and four degrees will give but slight fog. The formula of this developer is as follows:

Water	35	ounces
Pyrogallic acid	2½	drams
Anhydrous soda sulphite	6½	drams
Anhydrous soda carbonate	13	drams
Ten per cent solution potassium bromide	7½	drams

This developer does not keep long, and discolors somewhat rapidly during use. For keeping well it should be mixed in two solutions, as follows:

A:

Water	35	ounces
Pyrogallic acid	7½	drams
Soda Bisulphite (commercial liquid)	2½	drams

B:

Water	35	ounces
Anhydrous soda carbonate	19½	drams
Anhydrous soda sulphite	9	drams
Ten per cent solution potassium bromide	12	drams

Use one part A to two parts B.

To sum up: diamidophenol is the only developer giving negatives free from fog at a temperature of one hundred and four degrees. This developer should, therefore, be preferred whenever long keeping is not indispensable. The keeping qualities of this developer, as is well known, are limited.

If a developer is required which will keep for a long time without deterioration, preference should be given to metoquinone, or, failing this, metol-hydroquinone, or, finally, pyrogallic acid, which, used as above indicated, gives but slight fog.—Lumiere and Seyewetz, in *Amateur Photography*.

Printing In Clouds

In a recent number of *Photography*, Lieutenant-Colonel A. K. Gillespie writes as follows of his way of printing in clouds:

Briefly, this consists of placing a transparency of clouds with a clear glass foreground on a transparency of the landscape with a clear glass sky, and making a new negative from this combined positive. This method has long been adopted for making lantern slides, with the slight difference that the transparencies are placed film to film, whereas, for making a contact negative, the film of the landscape must touch the film of the new plate, and, consequently, the film of the cloud transparency must rest on the glass of the landscape transparency. The degree of diffusion thus caused in the cloud portion of the new negative is immaterial.

My own practice has run along similar lines, but is, I think, by a more convenient method. My regular camera is a quarter plate, $7\frac{1}{4} \times 4\frac{1}{2}$, and all my prints are made by enlargement. Whenever I see a good useful set of clouds I photograph them and then make a transparency. Lately I have used for this purpose the Hydra lantern plate by direct-printing as adapted to giving the maximum detail. From this transparency I make a new negative in the center of a 5x7 plate, and carefully remove therefrom every trace of silver except the portion of the clouds I wish to retain. When I make my enlargement I arrange the view negative over the cloud negative in such manner as may be most desirable; the large size of the latter permits any adjustment that may be required, and as my skies are always kept thin, the details of the cloud negative easily print through. With a good collection of cloud negatives on 5x7 plates almost any requirement can be met.

The Keyboard of the Eye

The difference between the estimates of surface brightness made by the unaided eye on the one hand and by the instrument on the other is a pretty problem. The only solution that occurs to us is one that does not work out wholly to the disadvantage of our organs of vision. The eye strikes us as having not a single scale, like a sensitometric strip, but a number of scales, perhaps an infinite number, on the principle of the keyboard of a piano. Here the same series of tones is

repeated over and over, but in different keys. Perhaps our visual sensations in diffused daylight may bear the same relation to our visual sensations in an artificially illuminated interior as tenor bears to soprano, or bass to alto. When we enter a lighted room after being out of doors in fading daylight, the key of our sensitiveness is shifted. But our instruments have no key to shift. Chemical sensitiveness may in certain respects be greater than visual sensitiveness, but it can hardly have the same range and adaptability. —*Amateur Photography*.

Development of Panchromatic Plates

When the Autochrome plates first appeared it was suggested by some French writer that the ordinary light of the darkroom could be used if the plates were first immersed in sodium sulphite lye. This principle has been recently embodied in a patent taken out in Great Britain, whereby the inventor suggests the use of sulphurous acid in a one-in-four-hundred solution for the same purpose. He also states that five minutes' immersion of a panchromatic plate in a solution of potassium nitrite and acetic acid, one in three hundred, will permit a full examination of the plate during the development by the ordinary light of the darkroom. It is undoubtedly true that in the development of color screen plates the ability to look fully at the image and watch its development is a very great advantage; and it may be that we have in this method a better way than the original bisulphide lye to desensitise the plate and render it possible to watch the process of development.

"How To Retouch Negatives"

This is the title of the last *Photo Miniature*, to hand, and it is one of those excellent handbooks that should be in the hands of every photographer, whether amateur or professional. It contains much valuable information on the subject treated, as can be judged from the sub-headings, a few of which follow: Equipment, The Desk, The Working Light, The Touch or Stroke, The Modeling of the Face, A Typical Lighting, The First Lesson, and the like. Illustrations add to the value of the text in a marked degree. Copies of this, No. 122, of the *Photo Miniature* series can be obtained from nearly all dealers or direct from the publisher, postpaid, for twenty-five cents. Published by Tennant & Ward, 103 Park Avenue, New York.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Well Worth Considering

The catalogue of the last Wanamaker competition contained a "Foreword," by Alfred Stieglitz, that not only appealed to me, but also to several of our readers, who sent it along to us with words of approval. It reads:

"Photography as a medium of expression has its own specific virtues. Why is it that so many photographers endeavor, through every possible trick, to eliminate this? Why will they insist on trying to imitate other mediums of expression? Why do they pride themselves when their photographs are supposed to look like paintings? The judges of the 1913 Wanamaker Photographic Competition were unanimous in condemning all such pictures in which imitation of painting was the keynote. Photographers must learn not to be ashamed to have their photographs look like photographs. A smudge in "gum" has less value from an esthetic point of view than an ordinary tintype. A violinist who tries to imitate a piano on a violin is devoid of art feeling; he may produce something which might amuse a vaudeville audience, but not a musical one. Likewise, a photographer using photography to do a "stunt," or to imitate painting, may amuse those who understand neither the fundamental idea of photography nor the fundamental idea of painting. Purity is a fundamental in all that is worth while."

Instantaneous Development

One of our readers, George L. Holmes, a worker of no mean ability and experience, writes as follows: "In your issue of February I note quite a lengthy article on the Instantaneous Development of Films and Plates, which is of more than usual interest. It appears to me, however, that the article, in your publication, is dangerous rather than instructive to the amateurs, advanced and otherwise, to whom you cater. In the first place, it does not seem possible that one can

get the proper gradation, call it 'quality' or what you like, with such a concentrated developer. In the second, even in an 'instantaneous developer,' the oxidization of the developer on the surface of the film when the film is drawn through a shallow dish of developer and 'see-sawed back and forth,' is detrimental to the best results. In the third, an amateur's time is seldom so valuable that instantaneous development is necessary; and, while a quick treatment might appeal to one doing commercial development of amateur films for the trade or one connected with the 'movies,' it is apt to be detrimental to the results of the work of either the ordinary professional or the amateur.

"The great beauty of the tank system of development lies in the fact that the developer can be diluted so that its period of action must necessarily be long drawn out. With the average tank developer a minute more or less will not seriously affect the results; a formula used by a friend, an exceptionally good worker, is so slow in action that five minutes more or less makes practically no difference. In the instantaneous system a second or a fraction of a second might make the difference between success or failure. I am inclined, therefore, to strongly advise my friends to leave the 'instantaneous developer' strictly alone and to use the tank development, even though it be long drawn out; in fact, the longer the better as long as the plates or films are kept submerged below the zone of oxidization and the developer is agitated to prevent settling. From personal experience it seems that the greatest range of gradation in either films or plates is produced by the slowest development. Don't hurry; there is little to be gained by rushing, and nothing was ever done thoroughly well in haste: with a camera, at least; with a six-shooter many good jobs have been done 'instantaneously.'"

While I am willing to admit that there is much that sounds very reasonable in Mr.

Holmes' caution, I am quite sure that much could be learned by experimenting with the "instantaneous" method of developing described by Mr. Mortimer. Years ago a well-known professional in Chicago, Moreno, advocated an undiluted developer made up of saturated solutions of pyro, carbonate and sulphide, and his results, judging from prints made from his negatives, left nothing to be desired. A local worker who followed his advice turned out exceptionally fine negatives and turned them out regularly, to my own personal knowledge.

Dusting One's Plates

It is very doubtful if the dusting off of the surface of each plate as it goes into the holder is a practice to be recommended. True, some workers find much satisfaction in a religious adherence to the practice and no doubt are sure that it is effective as a preventive of pinholes and other troubles. On the other hand, equally as experienced workers affirm that any brushing of the surface of the plate causes it to become electrified, with the result that dust particles are attracted, really causing more pinholes than would otherwise appear. The real truth is no doubt somewhere between these two extremes. One should be able to wipe the surface of a plate with a piece of cotton flannel wound over a strip of wood, and do it so as to cause but little, if any, electrification of the film. There are cases when one can expect some deposit of dust, as when a partially used box of plates is being drawn upon after having been opened and the wrapper replaced some time previous. Lint from the wrapping paper is almost sure to be found deposited upon the upturned surface of the top plate should it be in that position. And yet, it seems quite possible that any dust that may get to the surface of a plate, under ordinary conditions, before it is inserted in the holder, can be but a small part of that which threatens the plate from other sources. The average camera is far from being dust tight, as can easily be proven by taking a damp white cloth and wiping out one corner of the bellows. After trying this experiment, it is not difficult to imagine the interior of that camera after being carried about, the holder inserted and the slide withdrawn. One can easily picture the same condition that exists in a room where tramping about has disturbed the dust of the carpet, dust that can

plainly be seen by admitting a beam of sunlight through a closed shutter. Again, let us contemplate for a moment what happens when a slide, more or less dusty, is withdrawn from the holder, reversed and replaced. True, the velvet trap at the end of the holder wipes off and removes most of this dust, but it is still held within the holder to be dislodged when the next exposure is made and the slide inserted. This valve forms a veritable dust trap, always ready to spill a portion of its contents downward over the surface of the plate as the holders stand on end in their case. A much wiser procedure than dusting the surface of one's plates would be to expend the same amount of time and trouble in keeping the interior of the bellows free from dust and occasionally blowing the dust out of these traps at the ends of the holders with a strong pair of bellows. A soft white cloth on which a few drops of glycerine have been spilled and allowed to permeate it by hanging for a few hours in a warm atmosphere, forms an excellent dust remover. The glycerine makes any dust adhere to the cloth and it does not have the ill effect that repeated wiping with a wet cloth would have. In blowing the dust out of these valves or traps at the end of the holders, it is well to remember that the corner of a slide should be inserted so as to hold back the valve while the blowing is done from the inside of the holder, outward. Trying either plan will astonish the average worker by the amount of dust dislodged, an amount that will convince him of the real danger of dust that he has been overlooking.

Developer Stains On Fingers

An Iowa reader, a dentist, complains that his developer causes ugly stains on his finger tips, particularly around the roots of the nails, despite his best care. A preventive that I think would be well worth his trial, particularly as he seems to do the work with only the tips of his fingers introduced into the solution, is to give the ends of his fingers a coating of flexible collodion. This can be obtained at any drug store and it is only necessary to dip the fingers into it in order to give them a coating that will be impervious to the developer. After the work is done, the collodion is easily removed with a little alcohol. The bottle containing the collodion should be, for convenience sake, a wide-mouthed one.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

The Portfolio Division

Through the hard work of Sigismund Blumann, No. 2323, the Portfolio Division of the I. P. A. was launched. The first and second albums have successfully braved the storms of criticisms from those who would not contribute prints for its success. The object of the Portfolio is to get different workers in closer and more intimate touch with each other, and to improve our work, both technically and artistically. It helps us to approach that ideal we have set, better pictures. It is simply the working out of an ideal. If we do not keep striving to attain that ideal, life is a failure. The same law holds true in photography. The third album is a work now under course of construction. The foundation has been laid. It is being built as fast as the workmen contribute material to it. It is expected to be launched about July first or fifteenth, and will sail into the port of every worker who contributes to it.

I can use a great amount of good material. I do not expect to use all that is sent me, as much depends upon the grade of the prints. I can use some good water and marine scenes, moonlight pictures, and pictorial landscapes. Will the members rally to my assistance and send prints for this third Portfolio? I know they will.—ROBERT GREETHURST, I. P. A. 2092, Director of Third Portfolio, Lewiston, Minnesota.

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Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

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Utah—John C. Swenson, A. B., Provo.

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NEW MEMBERS.

3657—H. N. Krenkel, 715 10th St., Sacramento, Cal.

3/4x4 1/4, 4x5, and 3/4x5 1/2, various papers, of landscapes, city views, etc.; for views of Yosemite Valley, Yellowstone Park, and Lake Tahoe; also wants views along lines of Southern Pacific, Ogden & Shasta Routes, and Oregon Short Line scenery. Class 1.

3658—H. W. Rutherford, 2863 E. 77th St., Chicago, Ill.

3/4x5 1/2, of bridges, buildings, steel plants, and lake steamers; for industrial views. Post cards only. Class 1.

3659—Otto Bundy, Box 225, Laurel, Mont.

3/4x5 1/2, various papers, of landscapes, rivers, cowboys, and general Western views; for Eastern scenes, California views, and mountain scenery. Post cards only. Class 1.

3660X—R. P. Bates, Box 153, Corsicana, Texas. Post cards only. Class 1.

3661—Herbert B. Turner, 29 Raymond St., Cambridge, Mass.

Stereoscopic 4.5x10.7 millimeters, on plates only, of European and Boston streets, public buildings, architectural detail scenery; for U. S. scenery, mountains, coast views, stereoscopic on same size glass positive; desire to exchange only stereoscopes, 4.5x10.7 millimeters on glass, also photos of historic and old houses in New England. Class 1.

3662—L. H. Palmerlee, Azusa, Cal.

4x5, developing paper, of mountain scenery, comic, still life, and miscellaneous; for the same. Class 1.

3663—Alfred Price, Box 451, Midland, Mich.

3/4x5 1/2 to 5x7, developing paper, of local views, winter and summer, pin-hole views, comics, etc.; for views of Western, mountain and comic. Post cards only. Class 1.

3664—E. A. Schroer, Mackay, Idaho.

3/4x5 1/2 and 5x7, developing papers, of outdoor views, mountains, streams, etc.; for any good ones. Class 1.

3665—W. A. Conley, 1118 G Avenue, Douglas, Ariz.

4x5, various papers, of scenic pictures, street scenes, and landscapes; for Mexican views, landscapes, scenes from smelters, mines, etc. Class 1.

3666—Olson & Hafen, 77 N. Acad. Avenue, Provo, Utah.

2 1/4x3 3/4 to 6 1/2x8 1/2, also lantern slides, developing paper, of artistic landscapes, and mountain scenery; for lantern slides and stereos only. Class 1.

3667—R. O. Robinson, Box 501, Clovis, N. M.

5x7 principally, developing paper, of children and ranch scenes; for miscellaneous. Class 1.

3668—S. C. Darling, Coburg, Ore.

5x7 and 3/4x5 1/2, various papers, of views of around the world; for views and post cards. Class 1.

3669—Louis S. Todd, Plainwell, Mich.

Am now prepared to exchange post cards in packages of from four to eight, under cover, with I. P. A. members. Also can furnish high speed 5x7 prints for the same kind of work. Class 1.

3670—A. W. Morris, 2810 Gardner Ave., Spokane, Wash.

Class 2.

3671—Elias O. Schwab, 328 Linden Avenue, Memphis, Tenn.

Class 2.

3672—Otto H. Sprain, Wallis, Texas.

Class 3.

3673—R. P. Bates, Box 153, Corsicana, Texas. 3/4x5 1/2, various papers, of landscapes, public buildings, flowers, and general scenery; for the same. Post cards and prints. Class 1.

RENEWALS.

256—Eric Schuman, Rolla, Mo.

Class 2.

3272—Frederick C. Lee, Box 643, Delhi, N. Y.

4x5, developing paper, of landscapes, water scenes, and animals; for any thing of interest. Class 1.

3342—Warren W. Willison, 714 Main Street, Davenport, Iowa.

4x5, developing paper, of miscellaneous subjects; for the same. Class 1.

3361—J. E. Winter, College View, Neb.

3/4x5 1/2, and 4x5, developing paper, of Chinese and foreign scenes, also local views; for mountain and river scenes, Indians, general interest views, also camping and hunting; unmounted prints only, no titles on front. Class 1.

3363—H. O. Howard, Kelowna, B. C., Canada.

Class 2.

3590—R. O. Higbee, 422 Malpine, Modesto, Cal.

3/4x5 1/2, various papers, of landscapes, and flowers, also can furnish pictures of typical California bungalows; for landscapes, flowers, and others having a spark of general interest. Class 1.

3620—B. F. Jones, R. F. D., care Tom Bray,

Berlin, N. J.

(Was Blythe, Cal.) Class 3.

CHANGES OF ADDRESS.

1213—A. B. Davis, 418 Franklin Street, Sandusky, Ohio.

(Was 128 Washington Street.)

1403—David G. Archibald, 724 High Street, Newark, N. J.

(Was 109 Miller Street.)

1771—Burton H. Allbee, 729 East 22nd Street, Paterson, N. J.

(Was Hackensack, N. J.)

2076—H. J. Becker, 1249 Fourth Avenue, Cedar Rapids, Iowa.

(Was Cascade, Iowa.)

2717—W. N. Bird, Box 121, Englishtown, N. J.

(Was Floral Park, N. Y.)

2816—Leroy C. Ferry, Eden, Idaho.

(Was Hillsdale, Idaho.)

2942—R. C. Smith, Box 1209, Butte, Mont.

(Was Anaconda, Mont.)

3020—C. J. Barnett, 123 N. Walnut Street, Danville, Ill.

(Was 107 N. Vermilion Street.)

3086—B. F. Atkin, Army & Navy General Hospital, Hot Springs, Ark.

(Was Fort Riley, Kans.)

3109—Richard L. Berger, 2322 Fairmont Avenue, Philadelphia, Pa.

(Was Atlantic City, N. J.)

3358—Asa L. Brower, Kamas, Utah.

(Was Ogden, Utah.)

3389—J. C. Banks, Wren, Ore.

(Was Foster, Ore.)

3434—W. A. Flowers, 801 E. 14th Street, Kansas City, Mo. (Was Las Vegas, N. M.)

3473—George B. Propp, Echo, Minn.

(Was Merricourt, N. D.)

3514—Nicola Celano, 434 E. 120th Street, New York, N. Y. (Was 515 1/2 E. 118th Street.)

3524—M. R. Carroll, 630 So. 13th Street, Paducah, Ky. (Was 507 So. 10th Street.)

3613—Albert Hoepfner, 803 Turk Street, San Francisco, Cal. (Was Crockett, Cal.)

3619—E. M. Addington, Sutter, Cal.

(Was Nevada City, Cal.)

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported By William Wolff

Will Cutherth of Sacramento has a baby. Lucky baby! Looks just like mother.

Miss Grace Hubley of Sacramento is showing some very fine new portrait studies.

W. S. Valentine of Redding has put in new fixtures and cases throughout. His studio now looks exceptionally attractive.

The Mith Studio at Red Bluff has added one of Rough & Caldwell's new bay window accessories.

The Bossum Studios must be thriving. The Sacramento one has a new automobile in which the writer was shown all of Sacramento County during his last visit.

Cook's Water stock must be paying large dividends. Our friend Sherwood of Stockton has taken on several blocks of the shares.

Shirley V. Bacon of Long Beach is now in Chicago settling up an aunt's estate. Shirley will report the amount of his share for the next issue.

H. E. Schurclitenbery of Pomona has just been elected State manager for the Yoe-men.

In Los Angeles the first week in May the writer met the following representatives of the photographic trade: Macness of Burke & James, St. Clair of Cyko, Post of Seed plates, Willis of Graflex fame, Bertrand of Cramer Company, Muller of the Vulcan, Davis of Denver, Saul and Grow of the Eastman Kodak Company.

Mr. Jeffries With The Northern

L. H. Jeffries, recently identified with a Milwaukee photo supply house, has accepted the position of manager of the retail department of the Northern Photo Supply Company, Minneapolis, Minnesota. Mr. Jeffries has been connected with the Photo Supply trade for more than eighteen years, and thoroughly understands every branch of the business. He is energetic, ambitious and desirous of pleasing his customers. He is well known among the photographic trade,

has a large following, is universally liked by all who know him, and the Northern Photo Supply Company consider themselves fortunate in securing his services. He will prove a valuable asset to their already large force.

The New Premo Catalogue

Get one of these new catalogues from your dealer, and while doing it, ask him to show you the new models in the line. The "Six-Three" is a little beauty; and, fitted with a fine lens working f-6.3, it is remarkably fine value for the prices asked. The new catalogue shows and describes the full line from the handsome little "Premoette" to the Empire State View camera that is so popular with professional view photographers. If not convenient to get the catalogue of your dealer, send directly to Rochester Optical Division, Eastman Kodak Company, Rochester, New York, and one will be mailed to you free of charge.

The Camera In The Far East

The most notable feature in the photographic trade in China at present is the tremendous increase in the exports from Japan, which in 1908 amounted to twenty-six thousand dollars and in 1911 to fifty-three thousand dollars gold currency.

On the other hand, the United States, the greatest producing country in photographic materials, has apparently decreased its exports to China and in fact ranks fifth among the importing nations with a total value of six thousand four hundred and forty-four dollars. Great Britain and Germany likewise have suffered a diminution in their export trade, although the latter country has maintained fairly well its share for the past four years. Great Britain has felt the Japanese competition to the greatest extent, as its direct exports to China for 1908 were valued at ninety-one thousand eight hundred and two dollars and in 1911, sixty-eight thousand nine hundred and seventy dollars. In the analysis of the trade with China, Hongkong

plays an important part, and the decreased exports of the United States and Great Britain are in a measure accounted for by the Hongkong exportations to China. These exports have nearly doubled in the past four years. The Chinese Maritime Customs returns do not of course indicate the origin of the Hongkong imports, but it is undoubtedly a fact that fully ninety per cent are imported into Hongkong from America and England, these two countries having about equal shares of this trade. Although the local demand for photographic material is undoubtedly great, it is probable that the larger percentage of the imports into the colony are redistributed among the treaty ports of China, and in this way add materially to the value of the photographic business of America and Great Britain with China.

In a general way, the kodak is only known in the seaports of China. The better educated Chinese have taken to the art with great enthusiasm. The Chinese are fast becoming experts and are very keen on having the best cameras and becoming acquainted with the latest developments. In regard to color photography, the Japanese insist on tinting their films, whereas the Chinese prefer to study the difficult art of the use of chromoplate and screened lenses and to get their natural colors in that way. The medium-sized kodak seems to be the most popular among the Chinese, while the larger sizes are particularly desired by the Japanese; likewise plates are more in use in Japan than in China.—*Daily Consular and Trade Reports*.

J. L. Lewis Branching Out

In every line of endeavor there is at least a handful of men who care more for future trade than the enhancement of their bank accounts. This truism is eloquently exemplified by J. L. Lewis, who has a splendid photographic supply emporium at No. 522 Sixth Avenue, New York, situated in the heart of the business district—Greeley Square. Mr. Lewis makes a specialty of cameras, supplies, papers, lenses, plates, films, chemicals, and all other requisites used in the photographing industry. Not only does he handle the domestic brand of goods, but he also has on hand the finest materials that can be produced from the other side.

Mr. Lewis has just won the splendid and honored distinction of being elected the

president of the Photographic Supply Dealers' Association of America. There are many photo supply houses that ought to join his organization, not only for the betterment of his own business, but for the many intelligent matters that are brought before the organization. There have been many abuses in this line of business during the past decade, but these are being wiped out by the photo supply houses, until there are very few objectionable features that are wrung in by freight dispatches and foreign houses that intended to make profit out of mere trifles.

Join the Photo Dealers' Association now. That is the slogan of Mr. Lewis, as President of his organization, and it is well worth digestion. Our compliments to the new president, and we know that the organization will take on new life from now on.—Abridged from *Mercantile and Financial News*.

The 1913 Kodak Catalogue

The publication of this new Kodak catalogue marks the completion of a quarter century of Kodakery, a period during which the Kodak people have made it their policy throughout to put real meaning into the phrase, "Kodak means photography with the bother left out." Even if you have a Kodak or two and have no intention of getting another at the moment, make it a point to get one of these catalogues of your dealer. It will tell you all about the new Cooke or Zeiss Anastigmat Kodak lenses, and also the Kodiopticon, the apparatus that gives photography a new use and a new pleasure through lantern slide projection. This last is something you will want to know about when you find out about the Velox lantern slide films, a still further simplification making the production of unbreakable lantern slides as simple as the production of Velox prints. If a dealer is not handy, write direct to the Eastman Kodak Company, Rochester, New York, and this catalogue will be sent you upon request.

The 1913-1914 Cooke Catalogue

Our readers should send for a copy of this instructive new catalogue, and do it at once before the matter is forgotten. In addition to listing and describing the complete line of Cooke lenses, Cylex lenses, and the new Cooke-Telar lens, which is a compact, high speed of long focus requiring but a short bellows extension, the catalogue contains much

NOTES AND COMMENT

valuable information. One of these specially informative articles is entitled, "What Depth of Focus Really Means," something that will interest every worker desirous of knowing something about that important tool, the lens. Copies of this catalogue can be obtained free upon request to the Taylor Hobson Company, 1133 Broadway, New York.

Have You Tried It?

Our friends, the Photo Products Company, tell us that a great many readers of CAMERA CRAFT took advantage of the special trial offer they recently made to send three dozen of Instanto paper or postals for a quarter. As a result, many customers have been made among the amateurs, to whom this high-grade paper has but recently been available. The makers absolutely guarantee it in every respect.

This company is progressive enough to realize that methods a little out of the ordinary must be followed if they would bring their paper quickly and forcibly to the amateur's notice. Hence, their liberal sample offer which they now follow by a still more generous proposition. Look up their ad. in this issue and you will find that they propose to send you prepaid on receipt of but one dollar, two half grosses Instanto paper (size 4x6 or under) and one-half gross of Instanto postals. We are sure a large number of our readers will be interested and suggest that they act quickly before the opportunity has passed. Clip the advertisements or simply mention CAMERA CRAFT in your letter.

New Chemical List

A descriptive Chemical Price List has been issued by the Defender Photo Supply Company, which lists not only the well-known Defender preparations, such as Argo Soda, Argo M-Q and Anti-Friction Tube Developers, but also a number of new prepared chemicals and developing agents. Among the former are Nomet Developing Powders, which contain no metol, as the name indicates; Anti-Friction Tablets, for rendering developer non-abrasive; and Potassium Bromide Tubes. Among the developing agents, in addition to Defender Motol, Monol and Hydroquinone, are Nomet Developer and Pyro in crystal form. There is a considerable increase in the number of photographic chemicals listed, among which we note citric,

oxalic and acetic acids and magnesium powder, in addition to an enlarged list of the well-known salts of potassium and sodium. All of these chemicals are offered under the Defender symbol of photo purity. A copy of the list may be obtained from the company's general office in Rochester, New York, any of the twelve branches, or from Defender dealers.

At The Illinois College

Roberto Rodriguez, of Cuba, who has been taking a course in photo-engraving at the college the past winter, has returned to his country to take charge of a newspaper engraving plant.

The graduation class for April gave a farewell reception at Garnet Hall last month. The class numbered twenty-one members and made quite an impressive appearance when attired in regulation caps and gowns. A number of good group negatives were made.

Albert G. Watson has taken a position with Charles Gallagher, former instructor, now located at Ely, Nevada.

Miss Lillian McLaughlin and H. E. Cook, who have been in attendance the past winter, concluded their course with a marriage ceremony. They will spend their honeymoon in Chicago and the East before locating in California, Mr. Cook's home State. Mrs. Cook's home was in New York.

The Bissell College baseball team played the first game of their schedule at Newton, Illinois. A number of rooters from the college accompanied the team.

Some Interesting Pictures

We have seen some remarkable photographs lately, made with Cooke-Telar lenses, showing what can be done to secure large images of distant objects. The makers have sent us several prints, one of which shows an aeroplane high up in the air, and yet brought forward so large that the driver and the two propellers are clearly distinguishable. Another picture shows a motorcycle traveling at full speed around a track. The image is large, and every detail of the bicycle is shown, although the photographer was enabled to stand well back with his camera. The work of the lens is well illustrated by two other prints which show a New York skyscraper in course of construction. Both photographs were made from the same position, one with a five-inch series IV Cooke anastigmat and the other with a No. 2

Cooke-Telar of ten and three-fourths inch focus. The Cooke-Telar was used in the same camera as the Cooke anastigmat, and with the same bellows extension, and yet the image of the Cooke-Telar is approximately twice the size of the image made with the Cooke anastigmat. For certain classes of work this feature is invaluable. The makers of the Cooke lenses, the Taylor-Hobson Company, 1133 Broadway, New York, will be happy to forward copies of these specimen photographs free of charge to those who may be interested in this subject.

Scientists Go North

Bound for Nome, Point Barrow, the Aleutian Islands and the Siberian coast, the little power schooner *Polar Bear*, Captain Louis Lane, left Seattle April second. Aboard the vessel is a party of scientists representing the Smithsonian Institution, the Harvard Museum of Comparative Zoology, and the Museum of Comparative Zoology of the University of California. Also aboard the *Polar Bear* is Will E. Hudson, staff photographer of the *Post-Intelligencer*, who will invade the wilds of the Far North to obtain moving pictures of big game, the seal rookeries, the bird islands, Eskimo life, and the hunting and trapping of polar bear, walrus and other game. He has with him a moving-picture camera with more than fifteen thousand feet of moving-picture films; and he will also make about one thousand pictures with his Graflex camera to illustrate the cruise. The party expect to be gone about six months.—*Seattle Post-Intelligencer*.

For The Professional Photographer

We have just received from the publishers a copy of a most informative booklet, "Color Plates and Filters for Commercial Photography." The booklet is a most valuable one for the professional or commercial photographer and one that every such work should make it a point to secure if he has not already been favored with a copy. It goes very deeply into the matter of orthochromatic photography and the rendering of color contrasts, particularly in connection with the use of Wratten & Wainwright plates and filters, which are now supplied by the Eastman Kodak Company. As the publication in no way concerns itself with artistic or amateur work, the edition has been limited to what was judged sufficient for professional distribution. For that reason it will be best

for those requesting a copy to use their business stationery or at least enclose their business card to assure being supplied in case but a few copies remain. It is sent out free to professionals who apply to the Eastman Kodak Company, Rochester, New York.

The Photographic Art of Wilbur H. Porterfield

When the new infant, photography, was ushered into the world, art stood over the cradle and wonderingly considered its future development, but not without something akin to jealousy.

It was with a great toleration that the new arrival was given nourishment, but it lived and thrived in spite of all, and today it is considered as art's greatest ally.

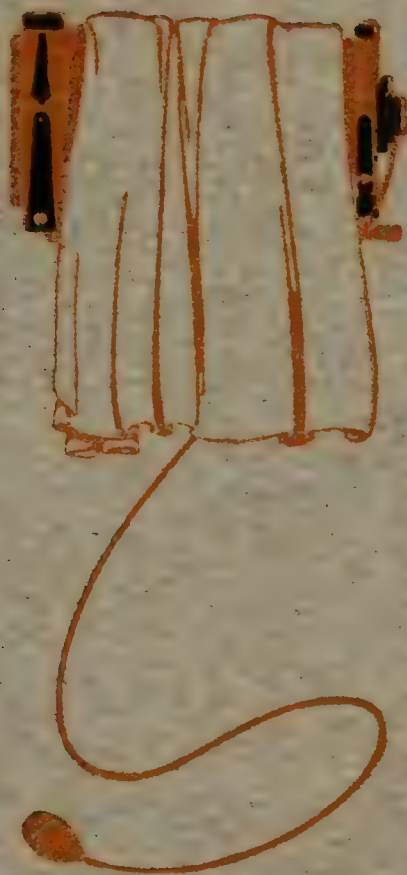
The greatest antipathy against photographic art and its followers has emanated from the cry that its results were "machine made," but this in itself has no possible bearing upon the work of Wilbur H. Porterfield, as in no pictorial art have we ever seen more of human element than in his collection now on exhibition at the Toledo Museum of Art. It is in these successful requisites that he excels and through which he was awarded the highest honors that are attainable both here and in Europe.

Porterfield is led by an emotional feeling in his work that is essentially artistic; it is not alone in his viewpoint that we see it, but in his color and composition, which evince the painter-like touch of shadowy aerial envelopment so sought for and suggested by our greatest painters.

It would be false to even suggest that the man were not an artist, it is so insistent in the artistic impulse which we find in his work. It may not be apparent to the average person that he who can arrange synthesis in form with a camera is doing a marvelous thing, yet we find it in Porterfield's work, and especially in his "Suggestion of Barbizon"; this picture in itself ranks him as an artist. It denotes a symbol of the lightest grace and sturdiest strength in all that makes for the highest pictorial utterance.

There is a lack of the literal in these photographs. a capacity for selection, and emphasis of artistry, that stamps it as the most notable showing we have had and utterly dissipates the threadbare argument of its most violent detractors.—Thomas Shrewsbury Parkhurst in *Toledo Times*.

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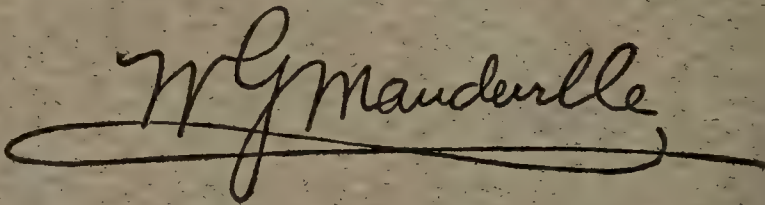


SAN FRANCISCO
CALIFORNIA

The Winner from Start to Finish at the New York Meet

I wish to say a few words about CYKO prints shown in the Comparative Exhibition of the Photographers' Association held recently in New York City. The CYKO prints were very fine and by far the best, and I was much pleased to hear many others say the same. This one thing paid me for the trip, and I thank you for your part of the treat.

Very truly yours,

A handwritten signature in dark ink, reading "W. G. Manderle". The signature is written in a cursive style with a long, horizontal flourish underneath the name.

The entries against CYKO were on all the different photographic printing mediums made in this country and some leading European papers, namely: all kinds of platinum papers, several brands matte albumen, and all brands of developing paper.

AnSCO Company

Binghamton, N. Y.





ROAD TO TAVERN
MUIR WOODS, CALIFORNIA
No. 6 NEEDLE HOLE
By PERCY NEYMANN, PH. D.

CAMERA



CRAFT

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FAYETTE J. CLUTE, Editor and Proprietor

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Pointers On Pinhole Work

By Percy Neymann, Ph. D.



With Illustrations by the Author

Much has been written and much more said concerning the various phases of pinhole photography and the advantages and disadvantages thereof. However, the subject, like many other good things, has not yet been exhausted. We base this statement upon the very faint knowledge concerning pinhole work exhibited by even the advanced amateur. The average amateur can hardly be expected to have read up extensively on the subject; and it is useless, therefore, to refer him to the large number of essays and writings upon pinhole photography. There is, however, No. 70 of the *Photo-Miniature*, which we would advise any interested worker to read. It contains much that, if absorbed, will be of the greatest assistance to him as a maker of pinhole pictures. We refer to "Advanced Pinhole Photography," by H. D'Arcy Power, M. D.

For contact printing, the use of plates smaller than $6\frac{1}{2} \times 8\frac{1}{2}$ is not recommended, and it will be found that the 8×10 plate is about as small as should be used. For enlarging purposes, somewhat smaller plates, such as 5×7 , are well adapted, provided one will be satisfied with a limited choice of subjects. Equipment such as is used by the perpetrator of the accompanying pictures has the disadvantage of being heavy and at times burdensome, but to the enthusiast and successful photographer, the results are worth many times the effort and the burden. The complete outfit used by the writer upon his pinhole jaunts weighs too much to be carried in the hand for any great length of time, and is therefore provided with rings and straps so it can be readily carried on the back, leaving the hands free and permitting of more comfort in walking and

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climbing. Fitted out in this manner, one inspires queries that are sometimes not entirely innocent of sarcasm, but the replies can be in kind; or, when the question appears particularly "fresh," one can resort to the supreme reply, silence.

The camera should be provided with reversible back, the usual swings, good, long bellows, and should be used upon a rigid tripod. The "lens" can be of the Watkins style sold at two dollars and applicable to any ordinary lens board, or it can be home-made. In the latter case, it is only necessary to provide a very thin piece of sheet copper, cut out a piece exactly fitting the edges of the lens board, find the exact center, put through this center a hole, punched gradually (and accompanied by careful filing away of the rough edge) with a No. 7 needle, and fasten to the lens board with small screws after trimming and fitting. One should blacken the copper on both sides with Higgin's Water-Proof Ink or the ordinary Black Japan Color. This done, one will have a pinhole lens suitable for all general pictorial requirements, and at a total cost of only about twenty cents.

An exposure meter and a watch, together with the plates and a focusing cloth (the latter is not essential), complete the outfit. Particular stress should be placed upon the desirability of using an exposure meter. To some of our readers the worker's method of securing pictures may show a lack of artistic aims, but experience has taught him that, excepting only the composition, all else is rather mechanical. Technical perfection gives a mastery of detail and this knowledge is acquired by experiment and experience. Art, in pictorial photography, is generally supplied by nature, the artist only finding or selecting it.

The pinhole is adapted to portrayal of any subject not in motion, but it lends itself principally to reproductions of those bits of scenery and views wherein accentuation of any one part is undesirable. This is particularly due to the fact that everything in front of a pinhole is in focus and to the further fact that, owing to the necessarily long exposure, light and shadow blend into one another, due to their continued but slow changing of positions. This action destroys or greatly minimizes contrasts of light and shade, a feature unavoidable in short, snappy exposures, even with screens and orthochromatic plates. Pictures taken with the image thrown out of focus or with soft-focus lenses are not true to the ocular vision or perception of that same subject, because only a limited portion of such a picture is in focus. While photographic lens is not a necessary part of the pinhole equipment, it is a very useful adjunct. At times, because of its power to admit and concentrate a large amount of light, a lens is useful in locating or finding the picture on the ground glass. Especially is this true where extremely short or extremely long extension of bellows is not required. It has been found that the hole made by a No. 7 needle, equivalent to a No. 6 pinhole, produces the best defined picture when used at a distance of ten inches from the plate. A lens of ten inches focus will produce the same size image as the pinhole at the ten-inch distance. By taking advantage of this fact, one may make such a lens a very valuable adjunct on the composition of his picture by using it while composing or arranging the view.

POINTERS ON PINHOLE WORK



NEAR TOBIN ON OCEAN SHORE RAILROAD, CALIFORNIA—No. 6 NEEDLE HOLE

Another method of focusing, let us rather say, finding the angle of view, is to use the largest opening in the Watkins or other pinhole just as a lens should be used; the image, however, thrown on the ground glass being somewhat indistinct. Of course, when the light is weak, this method has its disadvantages.



LIBRARY AND DRIVE, UNIVERSITY OF CALIFORNIA—No. 6 NEEDLE HOLE



MADE WITH No. 8 NEEDLE HOLE



MADE WITH F-6.8 LENS, STOP F-32

A third and probably the best adapted method, because applicable to all bellows extensions, is that proposed by the Rev. J. B. Thomson, and published in *Photo-Miniature* No. 27. The plan is to drive a small pin into the top of the camera front, directly above the center of the lens, and two other pins in the camera back, one over each perpendicular plate edge. By stretching a rubber band around these three pins, a triangle will be formed, one side corresponding to the plane of the plate with the other two sides of the triangle meeting directly over the center of

POINTERS ON PINHOLE WORK



THE WITCH TREE No. 6 NEEDLE HOLE

THE WITCH TREE F-6.8 LENS, STOP F-16

the front board. By sighting along these last two lines, from a position back of the camera, the angle of view can readily be discerned. In a similar manner, pins can be inserted on the side of the camera and the amount of sky and foreground included can also be determined.



MUSIC STAND, GOLDEN GATE PARK, SAN FRANCISCO—No. 6 NEEDLE HOLE

CAMERA CRAFT

Still another method can be resorted to, particularly when the light is good, this time having recourse to the lens. By racking the lens in and out to get the desired amount of subject, though the image on the ground glass be badly out of focus, it will show the general outlines sufficient to determine what is included, finally replacing the lens by the pinhole. Obviously, when once the angle of view has been determined upon, the bellows extension must not be changed. The exposure must then be made in accordance with Dr. Power's rules, *i. e.*, according to the distance between plate and pinhole aperture. It is well to mark off the distance between plate and pinhole in half inches upon one side of the camera bed.

As to exposure, we will assume that the reader's knowledge concerning pinhole exposures is akin to that of the writer's when he first attacked the problem. This knowledge is well described by an unwelcome term, photographically, namely: fog. However, by the use of an exposure meter, the entire matter becomes very simple, obviating for all time and under any and all conditions of light, the use of the more bothersome and less reliable exposure tables. We found that Dr. Power was absolutely correct in his remark, made a few months ago before the California Camera Club, to the effect that, working according to the rule he had laid down, failure in exposure is impossible. But to follow the method advised, it is necessary that one be able to correctly employ and read the exposure meter. The writer uses the Wynne meter, not by any preference, but because it was the one originally purchased and has since given universally good results. The speed of the plate used must be known and that information is given in the table accompanying each meter. It does not make any difference in figuring pinhole exposures whether the U. S. or the F. system be used. The necessity of multiplying the pinhole number by distance, in inches, between pinhole and plate, demands a knowledge of the pinhole numbers, and these last are marked on the Watkins and other pinhole lenses. The number assigned to a hole made with a No. 7 sewing needle is 6. Let us assume an example, *viz.*: The Wynne meter, held in the shadow of the trunk of a tree such as illustrated in "Road to Tavern" herewith, requires three minutes to color the paper to the full tint, a long time, the scene being mainly in deep shadow. Consulting the table accompanying the meter, it is found that the speed of the plate to be used is equivalent to the number 512 of the U. S. system, or to 90 of the F. system. The determination of the exposure time or F. value, according to Dr. Power's rule, is accomplished by multiplying the pinhole number, 6 in this case, by the distance in inches between pinhole and plate, which we assume to be ten inches in our example. Multiplying these figures gives sixty, and, looking for that number or the nearest one thereto upon the scale, we find 64. Having set the meter so that the plate speed number, 512, is opposite three, the number of seconds required to secure full tint, the exposure for f-64 reads three-eighths minute. Pinhole exposures require sixty times the indicated meter time. It is important to remember that. The smallest fractions of time indicated by a meter are those of a second, and pinhole deals with minutes. We found, in our example, that the time required to secure full meter tint was three minutes, hence, the time of exposure indi-

POINTERS ON PINHOLE WORK



EUCALYPTUS PATH—No. 12 NEEDLE HOLE

cated in minutes must be multiplied by sixty, and therefore an exposure of three-eighths of an hour, or twenty-two and one-half minutes, is required. This is exactly the exposure given for the picture, "Road to Tavern," reproduced herewith. To elucidate further, let us assume two widely varying bellows



EUCALYPTUS PATH—F-32 STOP IN F-6.8 LENS

CAMERA CRAFT

extensions. One picture is desired with the bellows set at five inches extension and another at twenty-five inches extension. For the first exposure, again using No. 6 pinhole, five times six gives $f\text{-}30$; and, for the second exposure, again using No. 6 pinhole, twenty-five times six gives $f\text{-}150$. By consulting the meter, it will be found that $f\text{-}32$ is the nearest number to the desired 30, and an exposure of one-fifth hour, or twelve minutes, is required for the first picture. In the second picture, the nearest number to the required 150 lies about half way between 128 and 192 on the meter, and the exposure is therefore about half way between three-fourths and one, or seven-eighths of an hour, equivalent to fifty-two and one-half minutes. When the light is very bright, as on the seashore, it is possible to achieve some indications of motion such as is shown in the marine view herewith, but defined motion is of course out of the question in pinhole photography.

The reproductions herewith are somewhat smaller in size than the originals, and for that reason do not lend themselves to minute comparisons between lens and pinhole pictures; but the softness of the pinhole examples as compared with the same pictures taken with a lens, will, I feel sure, invite favorable comment. Not only this, but several of the examples reproduced herewith have been selected to show that sufficient detail can be secured by pinhole exposures if they are correctly timed, while others show that it is easy to produce artistic effects without artificial manipulation.

Taking pictures in cramped situations presents little or no difficulty to the photographer who is equipped with a pinhole lens, photographs of architectural subjects having all the necessary detail requiring only a smaller pinhole. "Music Stand—Golden Gate Park," and others, made with a No. 6 pinhole, viewed as an entity, give enough architectural data, enough even for the student; and as pictures taken in bright sunlight, they are preferable to the sharp, contrasty results usually produced with a lens. The variations in angle of view that are possible when using a pinhole, are well shown by the two following illustrations. The first was taken with a six-inch extension; the second, with the camera in exactly the same position, with a thirty-one inch bellows extension, both with a No. 10 pinhole. The exposure for first was one minute; that for the latter, five minutes, or just five times that of the former. Both of these are well within the limits of pinhole photography; as a matter of fact, there is practically no limit to the telephoto part a pinhole can play.

The developing of pinhole negatives and the printing therefrom does not differ in any way from that of other properly exposed plates. When, by reason of the meter use, universally correct exposure is achieved, tank development cannot call forth the slightest objection. Though he has made many hundreds of pinhole exposures, the writer has never developed in any other way.

One of the chief advantages of pinhole work lies in the minimized danger from moving figures, particularly on holidays and Sundays. While making the exposure for "Road to Tavern," a young couple, wheeling their offspring in a go-cart, walked leisurely down the road. While exposing for "Library and Drive," several people walked towards the camera, but only on the extreme left will be noticed any indication thereof, a light spot melting into the sidewalk.

POINTERS ON PINHOLE WORK



PILLAR POINT ROCK, OCEAN SHORE RAILROAD
Five inches extension, twelve minutes exposure.

This was due to the passing of "a young Venus" in a white dress, carrying a parasol of light color and walking in a straight line away from the camera for fully half a minute. Had the costume been darker or her course at an angle to the plate, no indication of her presence would have appeared. Puffs of wind, unless of too great frequency, are not disturbing, and then only when the object moving is in the immediate foreground.

The entire procedure of pinhole photography, once mastered in its few simple details, offers so many advantages that every photographer, professional



PILLAR POINT ROCK, OCEAN SHORE RAILROAD
Twenty-five inches extension, fifty-two and one-half minutes exposure.



MISSION SAN CARLOS DI BORROMEO, MONTEREY, CALIFORNIA—No. 8 NEEDLE HOLE

or amateur, will find it abundantly compensating in producing pictures of really artistic merit. I can only add that, aside from this mastery, the chief requisites for successful pinhole photography are patience, pains and perseverance. Let the good work go on.

Principles of Art

It would be beyond the truth to say that the principles which underlie all work are the same. Those principles are as diverse as the temperament and the characters of the races among whom they were developed. The Egyptians loved mystery and symbolism; the Greeks carried the refinement of form to perfection; the Romans reveled in richness; the Byzantines indulged in a brilliance of color that is yet always barbaric; the Arabs gave themselves up to the subtle inter-weaving of intricate detail; the artists of the Gothic period combined religious sentiment with energy of execution; and those of the Renaissance returned to the worship of beauty for its own sake. We would seek in vain elsewhere for the all-pervading symbolism that runs through Egyptian ornament, the purity of line that characterizes Greek detail or the sumptuous that belongs to Roman scrollery. Inasmuch as all nations and all ages differ, their expression in ornament differs, and inasmuch as all nations and all ages are alike, they express themselves alike in their every-day art.—LEWIS FOREMAN DAY.

Some Constructive Criticisms

By A. T. De Rome



So many of the prints that have been received for criticism seeming to show the same general defects, the writer has thought it advisable and of greater advantage to the camera enthusiasts and earnest workers who are following this series to interrupt it and give an open criticism of a few of the prints received. It is really gratifying to find that there are so many earnest camera workers striving to make their pictures more artistic rather than feeling satisfied in making them merely records. As the reader has no doubt gathered from the preceding articles, the writer's one big object has been to induce the camera worker to make his picture tell a story, a story of human interest, one that will interest others, one that tells something, perhaps one that is simply "newsy." This is not at all difficult. It consists merely of catching those things as they present themselves in our every-day life at the moments of their greatest story-telling action.

Take our first illustration, for example: Speaking from the mechanical or technical side of photography, the print is very opaque in the shadows. There should be atmosphere on the shadow side of an object as well as on the light side. The loss of this atmosphere, and of the reflected lights, that is, those lights that occur within the shadows, is the cause of most of the flatness appearing in photographic portraiture. We know this figure is posed. The cap, it would seem, is rather out of place in the house. Were the subject, for example, reclining or lounging at ease on a porch or veranda, the wearing of such a cap would be more in place. However, the arranging of the lighting on the figure and book has been very well done, although the picture could have been improved by leaving out the streak of lighting and bunch of flowers at the right of the



"OUR FIRST ILLUSTRATION"



"OUR SECOND ILLUSTRATION"

CAMERA CRAFT

curtain. It is, as a rule, far from good practice to photograph a head or figure against a background of pronounced design. The subject breaks such a background up into irregular patches of light and shade, and these, having the same attention-holding value as the light and shades on the figure, detracts or draws therefrom.

Our second illustration is very much better than the first, in this, that it tells a story; but it could be greatly improved by being trimmed as indicated by the lines drawn across it one naturally expects a Gypsy fortune teller to occupy a tent; and, fortune telling being a very ancient institution, the more weirdness worked into the picture, the more mystery it will suggest. The window and the strong light are serious faults, as you will remember I explained in one of my past articles in which I called particular attention to the fact that the thing we wished the mind to grasp first should carry either the strongest light or the strongest dark. In this case, it should be the strongest light, yet the photographer has used this light to concentrate all the attention on the window, causing the mind of the observer to more or less completely ignore the real subject, the thought which the photograph was intended to convey.

There is little in our third that is of either human interest or story-telling value. It has absolutely no depth. It is impossible for the eye to perceive anything as jet black, situated at a distance of even one hundred yards. As pure color recedes from the eye it becomes gray, and should always be rendered as such in our photographs if the effect of proper depth or distance is desired. Were the foreground of this picture made darker and the distance and the

lighting more delicate, its value would be enhanced a hundred fold. The story told by the entire area of the print, as shown in our next example, could have been told a great deal better in the small, line-enclosed space. It is work of this kind that I particularly referred to in my article on "Eliminations of Non-Essentials." You will remember my saying that it was



"THERE IS LITTLE IN OUR THIRD"

vastly more profitable to get a square inch of goodness than several square inches of mediocrity. If the small composition enclosed within the lines were enlarged to about six inches in width, the maker would find that he had a very pretty little print, one that told as much as the entire print now does, only in

SOME CONSTRUCTIVE CRITICISMS

a more beautiful way. In other words, the print in its entirety is simply historical, while that portion enclosed within the lines is quite poetical.

Our last illustration is very typical of the average amateur's out-door portraits, this really being a portrait rather than a record of any particular scene. It is true, the ladies are evidently watching a boat; but, had they been pictured as in the act of getting into that boat, or greeting friends just stepping therefrom, or with the boat just disappearing around the bend in the river, how much more interesting the result would have been. This picture could

have been taken to better advantage the upright way of the film, as indicated by the lines in ink. This picture is of the kind that we all make, only to regret, later, that we took it. But if the photographer will only bear in mind to always catch his subjects at the moment when they are doing something in a natural way, amidst natural surroundings, he will



"AS SHOWN IN OUR NEXT EXAMPLE"

not only secure prints having good artistic quality, but pictures that tell their story more clearly. It will be noticed that the figures have been placed exactly in the center of the picture space. This always has a tendency to divide the picture into two halves of equal interest. By putting the point of greatest interest either to the right or left, better composition and balance will always be secured.

The main thing in every picture, as I have said before in this article and as I will probably have occasion to repeat again and again in coming articles, is to get one's pictures to tell a story. Telling a story does not necessarily mean making something rechauffe, as a great many people imagine. A picture that tells a story need be but children in their acts of every-day life, children caught unconsciously at their play, friends or relatives doing some little thing that is characteristic or that we know to have become a habit with them. Every individual has his own peculiar way of expressing his own particular individuality just as does every landscape, every scene before our cameras. It is no more right to deny our portrait subjects the expression of this individuality than it would be to reconstruct every landscape before the exposure was made.

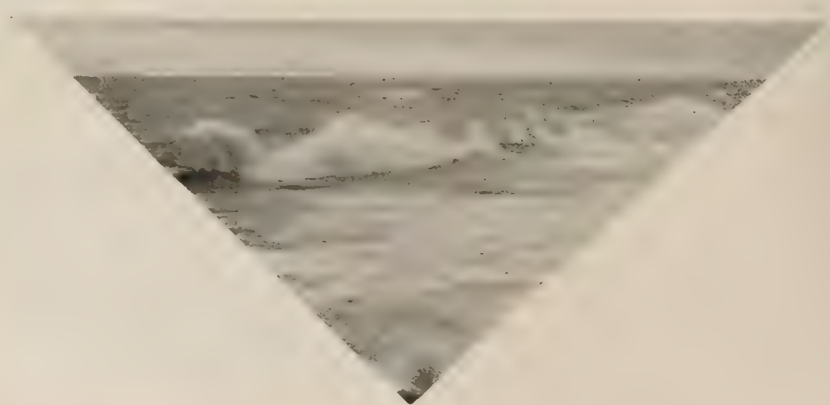
I have written this brief article in a rather light style as against the more formal one which I have hitherto used. I can very readily see, from the prints that are coming in, that the average amateur photographer takes in too serious



"OUR LAST ILLUSTRATION IS VERY TYPICAL"

a light the parts which go to make up the whole of art. For example, I find one earnest worker concentrating his whole attention on lighting, completely ignoring composition. On the other hand, I find another going to the extreme in making his picture tell its story in a historical way; that is, bring out every detail absolutely sharp. The only path to success lies in using each as we would one of our chemicals, to its own purpose, yet assisting and unifying other chemicals into a complete whole. This done, the result will be a picture that may be a joy forever. Let us hope that this ideal may be more generally realized.

I envy the beasts for two things—their ignorance of evil to come, and their ignorance of what is said about them.—VOLTAIRE.



Making Outing Pleasures Permanent

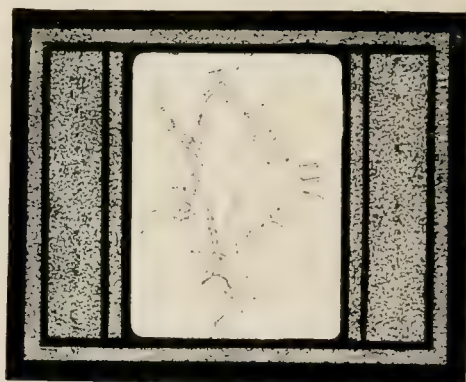
By Harry E. Van Luven



Mr. Van Luven, together with other members of his family, is an enthusiastic amateur lantern slide worker; and in this article he takes the reader into his confidence and explains how they go about gratifying their desire to derive all possible enjoyment from their summer negatives through the medium of the lantern. We hope to have other articles on the same subject from his pen as his time and opportunities permit.

A few friends had been invited in for the evening and we were entertaining them by taking them back into the North Woods via the "Lantern Slide Route." We began with the slides showing the list of grub, the duffel, the maps, and even the correspondence with the men who spell queerly, bear down heavily with blunt pencils, and agree to meet you at Dear Lake Landing on a certain date.

Sister, who had been taken along on the trip, was assigned to tell our friends, as the slides were shown, the details of our journey into Vacation Land. How the names of the Indians we met, the rivers and lakes we navigated, rolled from her tongue! She knew the trees, the flowers and the birds, even better than we, although she had been with us on only this one trip.



ONE OF THE MAPS

The first evidence that our friends were enjoying themselves came from Dick, who brought us back to civilization for the moment by shouting: "Gee! are you going again this year; take me along, will you?" We told him we



"AGREES TO MEET YOU AT DEER LAKE LANDING ON A CERTAIN DATE"



"A LONE CANOE STOOD OUT AS A SILHOUETTE ON THE MIRROR-LIKE SURFACE"

CAMERA CRAFT

would take him along on another trip in about a week and it wouldn't cost him a cent.

An hour had passed and the last picture was being shown. A lone canoe stood out as a silhouette on the mirror-like surface of the lake. Betraying ripples gave evidence that another canoe must have been near. Sister explained that the wind had died down during the night, that the sun had just risen and the unmarred beauty of the morning made it seem as though the weather gods were observing the day of our departure. One of our friends who is an artist remarked: "How well your cameras have reproduced the many moods of whimsical nature!" Our guests were all glad that our Kodaks had not been left behind when we took our vacation trips.

Begging the reader's kind indulgence for the above prelude, I will proceed to explain, as fully as possible, how our slides were made.

Last fall, as we had a whole winter before us and enough money in the treasury, we decided to try lantern-slide making; we also decided that we would not purchase a lantern until we were certain we could make slides. Ralph was appointed to look up data on making slides, and to bring home with him the necessary materials according to our good dealer's recommendations. Inasmuch as we knew nothing, at this stage of the game, about making reductions, we turned our attention to contact printing. Of course, we were all anxious to see how our pictures looked on the slides, but to sister we always give the honor of being first. Her negatives, being $2\frac{1}{4} \times 3\frac{1}{4}$, adapted themselves very nicely and allowed us to print the whole picture on the slide. My negatives, being $1\frac{5}{8} \times 2\frac{1}{2}$, also worked in without any loss. The evening we began our operations we made twelve slides and spoiled nearly as many more. Over-exposure was our chief difficulty, as the speed of the lantern-slide plates was found to be somewhat faster than Velox paper.

The result of our one evening's experimenting convinced us that, while we could make some fair slides, we could no doubt make better ones once we could determine the correct exposure. It never occurred to us to move our printing frames farther away from the light or place a piece of ground glass or tissue paper between the light and the frame in order to lengthen the exposure and give us better control. Nevertheless, we felt that the results obtained warranted our going ahead and purchasing a lantern, so for two hours one evening we looked through the lantern catalogues that were beginning to arrive in reply to sister's postal card requests. We decided that ours should be an electric outfit, inasmuch as we had electricity in the house; but we couldn't quite make up our minds as to the relative merits of the Special Tungsten and the "Baby Arc," so Jack was assigned the position of corresponding secretary for our Information Department. In due time we received a letter which informed us that the Baby Arc gave about seven hundred more candlepower than the Special Tungsten; that it was very easy to operate and not at all dangerous to the most inexperienced person. We had decided that we could afford to spend twenty-five dollars for a lantern; and, as the one which most strongly appealed to us cost only twenty-two, we thought it best to order right away; Ralph suggesting that perhaps our dealer could get it

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for us and save us the transportation charges. Mr. Dealer was interviewed the next day, and, as luck would have it, he had just received a couple of the very lanterns we were considering. Ralph made a deposit of eleven dollars and brought the lantern home with him that evening. Bob and Jack were quickly notified and lost no time in coming over. Sister read the instructions aloud while we connected up to the wires. The round metal terminals or lugs slipped over the screws on the "rat trap," which we now know as a rheostat; the soldered ends of the wires went into the small holes in the arc lamp, the plug into a wall socket from which we had removed the bulb, and all was ready. Sister read, "Turn knurled button under arc lamp until carbons touch, then reverse quickly." We did as instructed and as a result a white cone of light shot out from the lens and formed a circle on the wall. We had forgotten to put the slide carrier in place, but this was quickly adjusted and the circle on the wall took on a square shape. The twelve slides were brought forth and we selected the best one, the one made from sister's negatives, and to her we gave the honor and pleasure of putting in the first slide. Our delight knew no bounds. After the first thrill, we sank back in our chairs and wondered if that was really our own work.

The next day we purchased a supply of lantern-slide plates and soon we had one hundred and fifty slides ready for the lantern; these we divided into two sets, one for the year 1910 and one for 1911. You no doubt have made up your minds that we did not know it all, therefore it is needless to say that we learned something through the experience of making these slides.

First we found it necessary to cut a mask with an inside opening of $2\frac{3}{8} \times 3\frac{3}{8}$ for use in making contact slides from the $2\frac{1}{4} \times 3\frac{1}{4}$ negatives, and also one $1\frac{1}{2} \times 2\frac{3}{8}$ for the $1\frac{5}{8} \times 2\frac{1}{2}$ negatives. We used these between the negatives and the lantern-slide plate so as to protect that portion of the plate not covered by the negative, for if we did not do this, the light would creep in around the edges of the negative and fog the picture.

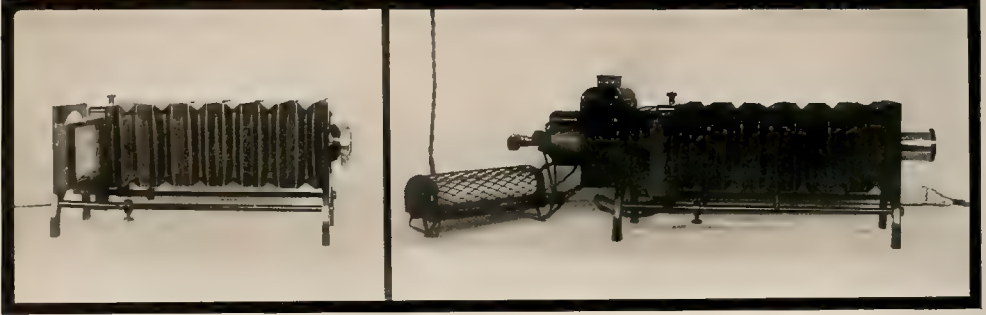
We also found it convenient to use a 5×7 printing frame. We made a few slides from the 4×5 and $3\frac{1}{4} \times 4\frac{1}{4}$ negatives, but we disliked to do that because the composition of our pictures was such that they spoiled by trimming. When printing from negatives of this size it is well to lay a sheet of black paper (or any paper that will block the light), with an opening 3×3 cut in its center, on the glass of the printing frame. On this may be placed the negative from which the slide is to be made. The extra size of the printing frame allows any portion of the negative to be placed over the opening in the mask. In this case the mask between the negative and the slide may be omitted and the slide will not be fogged.

If one has a good negative, it is the exposure and the development which govern the quality of the finished slide. Over-exposure tends to reduce contrast; or, to put it another way, over-exposed slides are full of detail, but this detail is covered up by light fog, as in over-developed slides the detail is covered up by chemical fog. Under-exposed slides are hard and chalky and usually lack detail.

We ascertained the correct exposure for the average negative by printing a slide in sections, this being very easily accomplished by slipping a card across

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the frame during exposure. The card was moved one inch each time and this gave us four different exposures on one plate. Upon development, it was an easy matter to determine which portion had received the proper exposure. After we hit on this scheme, we were able to work any brand of plates with good results.



"A CAMERA AS WELL AS A MAGIC LANTERN"

If one wishes to produce the best results, he should select some well-known brand of plates and stick to it until he is thoroughly conversant with its workings. By this time one will not care to change or he will be experienced enough to work any brand. Use, by all means, the developer recommended by the manufacturers, for they know what they have put into the emulsion and what will bring out the best pictures.

We began our lantern-slide experience in November and by the latter part of December we had slides made from all of sister's negatives and a portion of my own. It did not take us a month to find out the disadvantages of making slides by contact from $3\frac{1}{4} \times 4\frac{1}{4}$ and 4×5 negatives, but it did take us considerable time to discover a method whereby we could make reductions without purchasing an expensive outfit. Our outfits were all Kodaks without ground glasses and without sufficient bellows draw to make reductions. We could have built additions on the back of these, but we did not feel like attempting this just at Christmas time, so we rested on our past achievements and devoted our time to making notes and writing up our trips of the five summers, for we had spent five vacations in the North Woods, each year going into a different section. Many an evening during the month of January we gathered around the fireplace in our den and talked over our experiences, all for the purpose of refreshing our memories so that we might help sister in her work of writing the little stories which were to go with each set of slides. This was very interesting, but the real pleasure came when we brought our mental pictures and our Kodak pictures together.

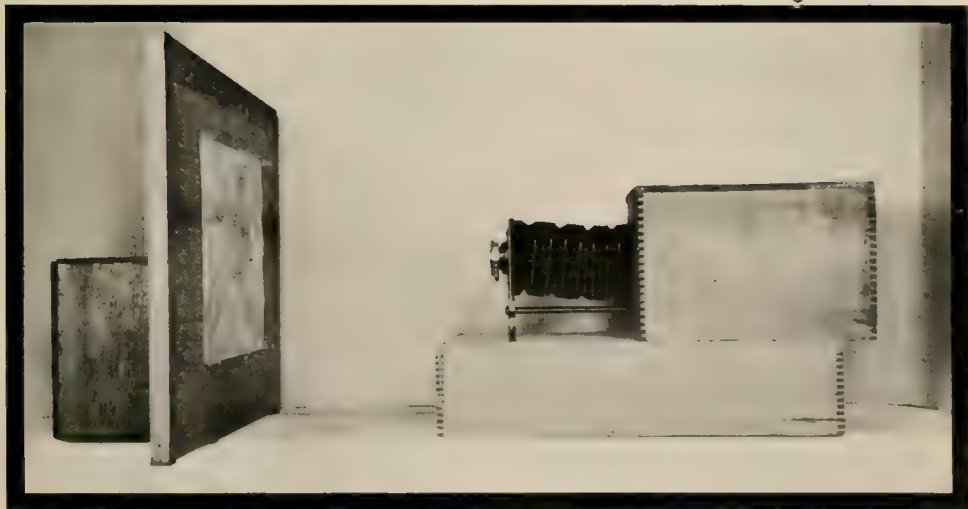
It was the latter part of January, when, looking around for something with which to copy our maps, we discovered we had with us a camera in disguise, for who would ever have guessed that the Model B Balopticon was a camera as well as a magic lantern?

It was Bob who made the discovery, and if the old adage, "A penny saved is a penny earned," holds true, we owe him about twenty-five dollars. The

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lamp house was removed from the main body of the outfit in the manner which the manufacturers intended it should be removed. The condensers with their mounting were slipped from their resting place. This left us with an outfit which, theoretically, might be termed a camera, but we had to have a focusing screen to make a complete equipment. The slide carrier took the place of the plate holder and ground-glass frame. The ground glass we did not have, so we substituted a piece of tissue paper between the two old slide plates, from which the emulsion had been removed. Two small pieces of wood were placed at each end of the plates so as to hold them tight. The openings in all carriers are made a trifle large so as to allow for the variation in the thickness of slides.

Ralph pinned one of our twelve-inch maps upon the wall of the dark-room and placed a light on each side of it. We then pointed the lens of the Balopticon toward the map and tried to focus on the tissue-paper focusing screen. We soon discovered that the lens was of too long focus, and very quickly substituted the lens from Ralph's 1x5 Kodak, one having a focal length of six and one-half inches. The Balopticon was held in place by a flange in which were three screws; these we removed. The lens and shutter were detached from the Kodak by simply unscrewing the ring on the back of the front board. To fit the Kodak shutter and lens to the Balopticon was a very easy operation. We simply took a piece of cardboard and cut a round hole equal to the diameter of the opening in the Kodak, then slipped the back lens mount through and screwed on the flange. We mounted the cardboard on the Balopticon by using the three screws which were used to hold the metal flange, being careful to

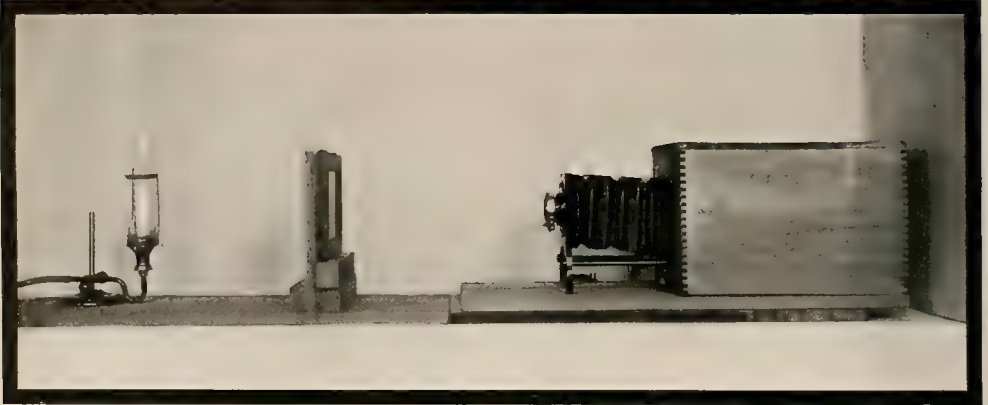


"WITH THIS OUTFIT WE MADE ALL OF OUR COPIES"

center the lens with the opening in the Balopticon. With this lens we were able to see the map on the focusing screen and make it the size we desired in the finished slide. The lights used to illuminate the map were turned out, and by the light of our ruby lamp we put a lantern-slide plate in the opposite side of the slide carrier from which the focusing screen was located, and slipped in two pieces of wood the same as we were using with the screen. These pre-

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vented the slide from moving during exposure. The carrier was now moved over so that the lantern-slide plate occupied the same relative position to the lens as did the focusing screen when we were focusing. A box was placed over the back of the outfit and the lights near the map turned on. At the end of thirty seconds they were turned off again and the plate removed from the



"THE FIRST WAS RATHER CRUDE, BUT SERVED ITS PURPOSE"

carrier and developed. About this time, sister came to the door and knocked for admittance, and it was with pride that we showed her a fully timed and brilliant negative, showing clearly all the lines in the map. We told her that the next evening we would have a lantern slide from this negative ready for her inspection, and we did. With this outfit, including a few minor changes, we made all of our copies.

From this little experiment grew great things; larger possibilities dawned upon us. Jack suggested that if we could copy a map by reflected light, we should be able to copy a negative by transmitted light. This sounded reasonable and before another week had passed we were making slides by reduction from our $3\frac{1}{4} \times 4\frac{1}{4}$ and 4×5 negatives.

It was necessary to construct an illuminating apparatus. We made two, the first being rather crude, but serving its purpose. The second was simply a more refined copy of the first. The negative holder was a simple arrangement which we made one evening before dinner. With this we were able to try out the various forms of artificial illumination. First we turned our attention to Welsbach gas burners, then strips of the Eastman flash sheets. Both of these worked well, the latter allowing much shorter exposure than the first. With the Welsbach burners we used two thicknesses of ground glass, with the flash sheets only one.

Ralph differs from the rest of us, for he would rather buy an apparatus than to make one; therefore, when we find ourselves in need of something, he usually goes shopping on the quiet. One evening he came home lugging a package which, he said contained an illuminator, loaned for trial by our good dealer. After dinner, we set it up and tried it out. It was designed for the very purpose which we were about to use it for, and we wish to say that it worked to perfection. It was not necessary to discard our negative holder, for

MAKING OUTING PLEASURES PERMANENT

we had made this to work with any illuminant. Our apparatus was now beginning to look rather elaborate, although it cost us but a small sum.

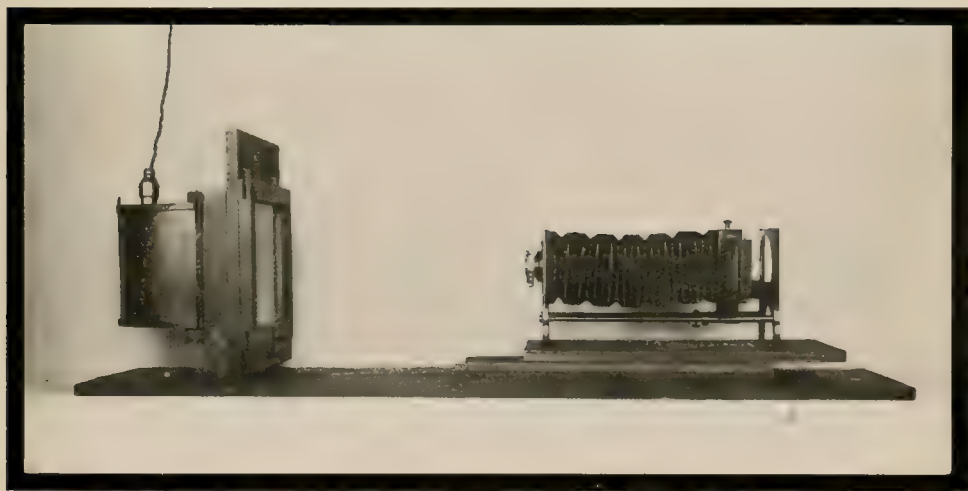
The operation of making a slide by reduction differed very little from that of making a copy. The mat was adjusted on the negative, then placed between the two pieces of glass. The glass was then placed in the negative holder, either in a vertical or horizontal position according to the subject, the opening in our negative holder being square. We found it convenient to use square pieces of glass just a trifle larger than the holder opening. All masks were cut with the outside measurements the same as that of the glass, the inside or opening measurements being according to the negatives used.

It was a puzzle at first to know how small to make our reductions and have them come just a trifle larger than the mats to be used in the finished slide. Bob solved this problem by suggesting that we mount one of each of the mats on old slide plates; then, by placing these in the slide carrier in front of the ground glass, we would have a guide when focusing, and the mats could be shifted until we decided upon the one best suited to the negative being used.


We learned very little that was new regarding the development of slides. We soon discarded the developer for black and white tones and adopted the manufacturers' formula for warm tones. We found that if we under-exposed a slide just a trifle, the warm tone acted as an intensifier, and if the slide was over-exposed, we simply had a little different tone than that which we expected.

Just a word regarding mounting. Sister says that she has found that a slide has a much neater appearance and is easier to bind if you cut the binding strip into four parts and apply each one of these individually, instead of binding the slide in one operation with the binding strip in a single piece.

In bringing this description to a close, we wish you to know that it was written in the hope that it may perform an office for you. We want you to share our enthusiasm; perhaps a sentence, a suggestion or an impression, may quicken your imagination and fill you with a desire to reproduce on slides that portion of Nature's Wonderland which your Kodak has seen.



"OUR APPARATUS WAS NOW BEGINNING TO LOOK RATHER ELABORATE"



STEREOSCOPIC DEPARTMENT

Why Stereo-Photography Unpopular?

By Oren L. Grubbs



With Illustrations by the Author

Stereo-photography is certainly the most neglected phase of our art, despite the fact that its results are the most realistic and the most beautiful. The average professional photographer, either lacking the time, or feeling that it will not pay, denies it attention. The ambitious amateur, following too closely the steps of this same professional, observes the lack of interest in this branch of the art and fancies it will yield no pleasure to him. Both overlook the most interesting thing photography has to offer and neither realizes his loss.

Just why such is the case would be hard to explain. However, there are a few suggestions that can easily be offered, suggestions that may partially clear up the mystery. With many the greatest problem is to overcome a few simple difficulties. The pictures require special manipulation and there are a few people that lack the necessary patience to "fool with them." It is no harder to take the stereo view than it is to take any other, but it must be remembered that distance is required in the stereo or it becomes a "flat" and useless thing. The pictures need to be transposed, either by cutting the plate or film and transposing the halves or by cutting the print before mounting. Then, too, there are, on the market, no pretty mounts for the views. The same plain, dingy cards that served a former generation are handed down to us. The picture must tell its own story without aid, and tell it so well that the mount is ignored. The fact that the picture must be viewed through a special instrument—ah! there it is at last, "the nigger in the woodpile"—is another reason for the unpopularity of such work.

Let us first consider the instrument, the stereoscope. Under this heading we have an array of instruments intended to aid the human eye in the apparently impossible task of optically superimposing two pictures placed side by side on a card. Some of the instruments are very expensive and elaborate, while others are quite cheap and simple. Some are rather bulky, while others are almost compact enough to be carried in the pocket. But no matter what the form, all are constructed on the same principle, and are indispensable to most people. At best, they are a nuisance.

The utility of the stereoscope depends upon the refracting powers of prisms, for that is what the lenses really are. These lenses are sections cut from a large

WHY IS STEREO PHOTOGRAPHY UNPOPULAR?

lens, as shown in the first illustration herewith, these sections, A and B, being transposed and set up as in the next or right-hand cut. Each lens or prism bends the rays of light coming from the picture it covers, causing them to enter the eye using that particular lens. Therefore, if the two pictures be rightly mounted and the two prisms have the proper setting, each eye simultaneously sees its own individual picture and stereoscopy or stereo-vision is mechanically established. By reference to the last mentioned illustration, it will be seen that there are three ways of setting the lenses with regard to the eye, and a moment's thought makes it evident that each setting will require a different position of the prints if a proper optical superposition is to be attached. The focal length of the lens or prism enters into this complicated problem, as does still another factor, the distance between the pupils of the eyes of the observer. Hence the person that can look through one stereoscope with comfort may have difficulty with another sufficient to result in a serious strain on the muscles of the eyes. So we can see that the most serious objection to stereo-photography is the necessity for a viewing instrument.

Then, is it possible to eliminate the stereoscope and obtain a direct stereo-vision? Yes, it is not only possible, but it is a comparatively easy matter to so train the eyes that the appearance of perspective is secured when viewing these pictures without the aid of a stereoscope. The thing is so easy that it is strange so few know about it or can do the trick. And it is probable that the amateur, if aware of its simplicity, would take advantage of it and soon become interested in these, the most lifelike of photographic productions.

Some months ago, I was looking at a stereo picture in an idle sort of way, and picked up a small card about two inches wide, without really thinking what I was doing; I held it about midway between my eyes and the double picture. It came to me so suddenly that I was surprised to find myself actually getting a sense of perspective. I at once tried to find out just what had produced this sense of stereo-vision, but for some time was unable to secure a repetition of the effect. It was only after many unsuccessful trials that I at last found the secret. It is necessary to hold the little card so that it will cut off the view of the picture on the right from the left eye and at the same time shut off the right eye's view of the left picture. But this is not all that is required. One must focus the eyes for some more distant object. So doing makes the lines of sight more parallel; or, in other words, causes the pupils of the eyes to slightly diverge. Almost any one can look cross-eyed by trying to look at the bridge of his nose, and securing stereo-vision depends on the opposite of this, the focusing of the eyes upon a point some little distance beyond the picture. It may only take one trial and it may take many, but the stereo-vision always comes, generally so suddenly as to surprise the one trying to attain it.

The next day I tried for two hours before I was able to see the perspective. This time, when it came, I noticed that there were apparently three pictures side by side. Only the middle picture, the one giving the perspective, was plain. The other two seemed to be mere hazy views, almost without form or distinguishing features. The simplicity of the process appealed to me and I went to work to systematically train my eyes to see these pictures stereoscopically.

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without even the aid of the small card. I soon found that the pictures had some prominent object in the foreground and near the center of the view were the easiest to optically superimpose; and, trying them in the stereoscope to find the reason, discovered also that they were the best pictures for stereoscopic effect. It requires a prominent object in the foreground to throw the remainder of the picture into good relief.

The size of the pictures and their separation do not make much difference, with the one exception that pictures mounted with a very small distance between their centers can be held closer to the eyes without discomfort. This method of viewing the pictures does not strain or injure the eye in the slightest, as it is accomplished entirely by the muscles controlling the eye. The only chance of injury lies in viewing large pictures at too close range. In my own case, I find it is easy to optically superimpose pictures as large as five inches square when held at a distance of about sixteen inches from my eyes; but if the size of pictures are increased to nine inches, or if two smaller pictures be placed nine inches from center to center, it is necessary to view them removed about four or five feet distant. The continued exercise soon developed the muscles of my eyes until they now respond instantly to the demand. In printing, I use a special printing frame that automatically transposes the pictures, making it unnecessary to cut them apart later. They are, therefore, stereo views as soon as they begin to develop; and there in the dark-room I find this natural method of examining them to be extremely handy. Occasionally, when they are under a slight layer of developer, it is hard to get the relief effect, but these are the only times when there is any difficulty.



THE PEPPER TREES—SOUTH PARK, LOS ANGELES

WHY IS STEREO PHOTOGRAPHY UNPOPULAR?

After training my eyes to view stereoscopic pictures in this way, I thought it would be a fine thing to be able to make such pictures for myself, and that led me to take up stereo-photography. Knowing but little about the principles of the art, I decided to visit a library and read up on the subject, so that I could decide intelligently as to the kind of outfit needed. But there was a large stumbling block in the way. Even one as large as the Los Angeles Public Library offered very little on the subject. There were many books on photography, but I saw it would be necessary to go through them all and pick out the little threads on the subject that I might find in each. One book in particular, one by an English author, interested me greatly; and imagine my surprise to find, in a paragraph on stereo-vision, that I was not the original discoverer of my acquired method. While the author did not claim to be the discoverer, he used the same plan that I have described, but he did not use the independent muscular control I have developed. The saying, "There is nothing new under the sun," seems to be very true indeed.

The more thought given the matter of a camera, the more I was convinced of the advisability of selecting an instrument that could be used in various ways. And then another difficulty presented itself. Manufacturers and dealers do not offer any great assortment of stereo apparatus. Most of the cameras were practically two instruments set side by side in one frame, making a neat machine, but one that does not permit of a wide range of work. The lenses usually fitted have a speed of from f-8 to f-16, while the shutters are of the "T, B, I" sort, with one speed of about one twenty-fifth second on the "I" or instantaneous.



THE FOOT OF THE FALLS—HEAD OF SAN DIEMUS CANYON

CAMERA CRAFT

It took quite a search to find the camera I wanted, but now I have one to be proud of. It is a 5x7 having sixteen inches bellows extension, fitted with a roller curtain or septum inside to prevent overlapping of the image from the two lenses. This curtain can be removed in an instant and the lens-board comes out easily, so that camera can be quickly changed to a plain 5x7 one. The long bellows permits the use of long-focus or telephoto lenses, and of course is long enough to permit of copying full size with an ordinary lens. It also enables one to use the front or back combination alone to secure larger heads in portrait work. The back of the camera revolves and can be removed instantly. It is fitted with a swing-back, both horizontal and vertical movements to the front board, and many other desirable features.

For stereo work, I find anastigmat lenses working at f-6.8 fast enough for almost all subjects. Mine are mounted in a shutter that gives time, bulb and instantaneous exposures, ranging from one one-hundredth to one second. A 5x7 rapid rectilinear lens completes the present outfit. I prefer plates, even though they be heavy to carry. And I certainly would recommend a good, substantial tripod; as, by its use, one's lenses can be stopped down and greater depth of focus secured. Depth of focus is essential in all stereo work and the large lens apertures should only be used in cases of necessity.

Taking up the making of the prints, several methods are available. If a large number are desired from one negative, about the simplest plan is to print one picture, cut the halves apart and transpose them in mounting, and then make a full size copy on a 5x7 plate. This plate can then be used in an ordinary printing frame to make prints on either stereo paper, 4x6, $4\frac{1}{2}\times6\frac{1}{2}$, or 5x7. I prefer 4x6 myself, as that makes the neatest size, one that requires only the trimming off of one-half inch along one side to make it ready for the regular mounts. Some people prefer smaller pictures, and for them the $3\frac{1}{2}\times5\frac{1}{2}$, or post card size, would probably be the best.

Where only a few prints from one negative are to be made, a transposing printing frame will be found the most convenient. Most of the printing frames on the market are only made to carry films, and the worker using anything other than the $3\frac{1}{2}\times7$ film will have to contrive a frame of his own. The simplest thing is a frame of the proper width to accommodate the plates or films used and a length of about twelve and three-eighths inches inside. The plate or film is placed in the center, a long mask being used. The paper is placed at one end of the frame so that only one print is made, after which it is shifted to the other end and a printing from the other picture made. Thus, with the paper first at the left-hand end of the frame, the right half of the sheet is printed, then moved over to the other end and the left half printed. This method seems slow, but it really can be made quite rapid if one will simply use two sheets of paper simultaneously. The left half of one and the right half of the other can be printed at the same time; then transposing the two sheets, print again. The next illustration shows the frame and therewith a sketch of the mask. My own frame is somewhat more complicated, having means for adjusting the position of the plate and the paper with reference to each other so that only the desired portions of the 5x7 negatives are printed.

WHY IS STEREO PHOTOGRAPHY UNPOPULAR?

There is an old custom of trimming the tops of the prints in the form of an arch, and though this makes a neat-looking job, it is evident that it is unnecessary. Sometimes it would really spoil the print to take away the upper corners. The two pictures reproduced herewith are examples in point that would hardly be benefited by such treatment.

Another thing the amateur should realize is the importance of selecting the right paper. There is really only one paper, or rather, one surface that is suitable, and that is the glossy. If the matte or semi-matte paper be used, its texture shows too plainly and spoils the picture. Papers that have a dead surface are not suitable, only the glossy papers giving the best effects.

If the amateur will but give the matter a little thought, I think he will come to the conclusion that stereo-photography lacks popularity only because it is not understood. Then, if he will consider the beauty of the stereo pictures, their greater interest as compared to ordinary photographs, I think he will soon be a convert to this old, new art.

Artistic Taste

The training of the taste is not purely a matter of ornamental education; nor does it imply, even indirectly, an affectation of luxury or of the expenditure of wealth. In most branches of trade and in many branches of manufacture, an artistic taste is a matter of practical importance in the gaining of one's livelihood. There are few kinds of handiwork in which the element of design does not enter, and whenever the arts of design are in question, taste has to be exercised.—WILLIAM HENRY GOODYEAR.



EASTER LILIES

By F. BELMONT ODELL

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

REMOVING FILM FROM OLD NEGATIVES: To clean the film from old glass negatives I have found nothing better than placing them in a pan of cool water and bringing to a boil. This method will be found effective for ninety per cent of the plates submitted to it.—E. Stanley Thomas, Ohio.

USING FERROTYPE PLATES: I suppose I have had the usual troubles of an amateur trying to ferrotype prints. I tried everything recommended, even to the compounds put up in bottles and sold for the purpose. Finally I was advised to thoroughly rub the surface of the plates with a tuft of cotton saturated with denatured alcohol, this treatment not only cleaning them, but preventing the prints from sticking. It works admirably and removes any necessity of using any kind of a wax or polishing solution.—H. M. B., Ohio.

SIMPLE ACID FIXING BATH: Here is a formula for a simple acid fixing bath for those who wish to make up such a bath without going to the trouble of mixing the acid-alum hardener. Make up as follows: Take common one to four hypo solution and to each forty ounces thereof add one ounce of sodium bisulphite. I have used this and find it excellent. I have washed negatives in twenty-five minutes by changing the water every three minutes and using an 8x10 tray for two 5x7 negatives. A caustic soda-permanganate of potassium test showed no sign of hypo after such treatment. This is also fine for developing papers.—O. T. B., Oregon.

TO SIMPLIFY PRINTING: My printing machine can be carried in the vest pocket, as it consists of only a coil of magnesium ribbon and a tube made by bending a strip of tin around a three-inch wire nail and then flattening out one end. To use, put a test strip behind the negative in a printing frame set up on edge, make a pencil mark on the table thirty inches in front of it, and at that point hold the tube, in which has been inserted an end of the ribbon extending one inch beyond the flattened opening. Ignite this free end with a candle or alcohol lamp and it will burn to the tube and go out, making the exposure. One inch of the ribbon is about right for an ordinary negative at thirty inches distance. Should the print be over or under exposed, increase or decrease the distance accordingly. For very thin negatives, it is advisable to diffuse the light by interposing a tissue paper screen between the light and the frame. Once

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the right exposure is determined, it is only necessary to use the same length of ribbon at the same distance and all prints will be rightly exposed. This method does away with counting seconds, there is no uncertainty as to the strength of the light, the printing is rapid and the prints are absolutely uniform.—James Dunlop, California.

CUTTING MASKS: By the use of a trimming board, opaque paper printing masks with square corners may be easily and quickly cut. Fold the paper lengthwise, press down carefully, and then again crosswise, being careful that the two folded edges exactly coincide. If both of these edges be pushed firmly against a plane surface, they will come even and the fold may be pressed down. Determine carefully the exact dimensions of the opening desired and then, with two cuts, remove the corner of the folded paper, making one cut half the width of the desired opening from the corner, and half the length of the desired opening. On unfolding the paper, the opening will be perfect and true if the edges were held firmly in place on cutting board. Should the cuts extend beyond each other where they meet at the corners of the opening, it is only necessary to rub them down with some small tool against a hard surface and the light will be stopped perfectly. If the edges of the mask be left of good width, the mask will hold its shape better.—F. M. Steadman, New Hampshire.

CLOUDS PRINTED IN: I sold to a commercial photographer of artistic ability a $6\frac{1}{2} \times 8\frac{1}{2}$ negative of a scene looking along the shore of a lake. While rather of an attractive view, there was a deadness and lack of atmosphere about the finished print, with its nearly pure white sky, that had puzzled me many times. I called several days later to see what sort of a print he had made from this negative, and the beauty of his finished product made me exclaim in wonder and admiration. He had printed in a beautiful sky of clouds that added marvelously to the atmosphere of the picture. As he covered the clouds with a slip of paper, the shore line flattened to the surface of the print with scarce any depth, and as he uncovered them, the shore visibly receded to its proper perspective in relation to the balance of the picture. Of course the beauty of the scene was greatly enhanced by the clouds, but that depth and atmosphere caused by their presence opened my eyes to the possibilities of this kind of "doctoring." —V. A. Wood, New Jersey.

TIGHT STOPPERING AGAIN: In this department of the January issue there were a few lines about "Tight Stoppers." I expected to see some one object to this in the February number; but as no one has, I'll say my say. About the first thing I learned when I began the study of physics was that any decrease in the temperature of a body caused a decrease in its volume. Applying this to the stopper situation, one gets the following conclusion: Having a solid stopper, usually of large bulk compared to the neck enclosing it, if the bottle neck is placed in a freezing mixture, one will have uneven contraction. The neck will contract sooner than the stopper which is protected by the neck, causing a tightening around the stopper, and later the neck will crack, terminating the usefulness of the bottle.

If one uses about three feet of heavy cord in the following manner, he will be more apt to succeed: Tie one end of the cord to something stationary and

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loop it around the neck of the bottle. Holding the bottle in one hand and the free end of the cord in the other, move the bottle back and forth, allowing the string, held fairly tight, to slip around the neck of the bottle. The friction set up will cause the neck to heat, creating expansion. While it is hot, tap the stopper gently with a small block of wood and it will usually loosen.

INCREASE OF EXPOSURE FOR COLOR FILTER: A friend of mine has several color filters and wanted to find out what increase of exposure he should give with each without going to the trouble of exposing plates by guesswork. We solved the problem in a manner that can be outlined as follows: Take a little book with the star-shaped opening cut in the corner of its cover as recommended by Mr. Steadman, and expose a piece of "Brownie" or other ordinary film beneath it until a decided tint is secured, say two or four seconds. Next move the film, bringing a fresh portion under the opening, having previously placed the color filter to be tested over it. Expose until the same tint is obtained, and the duration of the exposure required, as compared with the first exposure, will clearly show the number of times the exposure must be increased with the filter in actual use. It is advisable to use film on account of its being orthochromatic. This experiment need only be tried once, as, when the increased exposure is found, it can be noted for future reference.—David J. Sheahan, Washington, I. P. A. 2933.

SEPIA TONES IN DEVELOPMENT: Some months ago I discovered, by accident, a good method of easily securing sepia tones on first development. I do not know the chemical reaction, but it gives me good results regularly. It may interest some other worker. I am using the regular Azo developer, making it by the gallon and so having it always "on draught." Because it is always ready, I have been using it to develop plates, and keep the used developer until it is too old to be safe. After I had put five plates through a five-ounce portion of developer, I used the same solution to work out a batch of prints. The result was a set of prints of a surprisingly good sepia tone; in this case, just when I did not want them. Developer "on draught" is the handiest thing I have, the result of a simple contrivance. I bored a hole in the bottom of the biggest bottle I could find at the drug store, using the hard point of a three-cornered file. Breaking the point off the file will give one better cutting edges. Then I purchased the smallest stopcock I could get at the implement shop and fitted to it a small iron pipe shank three inches long, at a cost of thirty-five cents. Fitting this into the cork of the bottle, the thing was done. To use, I plugged the hole, put in the developer, inserted the cork, tied it so it would not come out, and then stood it, stopcock down, in a rack. I next took out the plug and poured in oil until it was one-eighth inch thick. I then had my developer instantly available in required amounts by the twist of my wrist. My dark-room is necessarily in the cellar, and the developer is always about the right temperature. A pint of water will dissolve a pound of hypo. This I keep in a jug, and it is always ready to be diluted to the desired strength with cold water. For me, this is better than to bother dissolving crystals. It keeps.—Rev. C. R. Lowe, Nebraska.

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A PHOTOGRAPHIC MONTHLY

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The London Salon

As usual, the announcement of the date of the London Salon reaches us too late to allow us to call attention thereto in time to be of much benefit to our readers. The announcement came too late for our last issue and with this number reaching our readers in the regular course, they will have but five weeks in which to secure entry blanks and get their pictures in London before the last receiving day, August twentieth. As the Salon is held at about the same time each year, we would suggest that such of our readers as wish to send might prepare for it in advance by supplying themselves with a copy of this year's prospectus and entry blank and making the pictures for next year's sending in advance of this time next year. We have a few of these entry forms and prospectuses and further copies can be obtained from Bertram Park, Honorable Secretary, 5a Pall Mall East, London, S. W., England. The Salon this year will be held at the Galleries of the Royal Society of Painters in Water Colors at the above address, from the sixth of September to the eighteenth of October inclusive. It is perhaps the most notable of the English Salons and one in which our own workers should be better represented.

An Interview With Mr. Eastman

EDITORIAL NOTE.—Knowing that our readers will be interested in the position taken by the Eastman Kodak Company in the matter of the suit recently brought against it by the Government under the Sherman law, we have secured an authorized interview with Mr. Eastman, covering the subject. This clearly defines the important points at issue and definitely outlines the position of the firm; and, doing so, should interest our readers accordingly.

“What we view as the main points at issue between our company and the Government are far from vital to the continued success of the company. They are substantially three: Operating our retail houses independently of our name, making of certain stencil goods, and our exclusive sales policy.

“There has never been any concealment as to the ownership of our various stock houses, and the adding of our name to their stationery and advertising matter will in no way affect them or us.

“We have always fought the system of making stencil goods and have, as a rule, refused offers to do it. It is a common custom in every trade, but one which works generally to the disadvantage of the manufacturer. It certainly will not hurt the sale of the stencil goods referred to, which we make, to put our name upon them.

“As to our exclusive sales policy, we differ from the position taken by the Government. We do not think it illegal or even unethical, and we know it has worked to the advantage of every one concerned, even to our competitors. One

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of the main points of this policy (respecting dealers in our patented goods handling no other similar goods) has been to prevent the substitution of goods that are the inferior of ours to unsuspecting customers. However, desiring to avoid a long and expensive litigation, the waste of time of our most important men, and the unsettling of normal business conditions, we are willing to meet the wishes of the Government even on this point.

"Although we do not think the recent decision of the Supreme Court in the Bauer case respecting the resale prices of patented goods applies to our policy of selling goods, we propose to alter our terms of sale to the extent of extending discounts only to such dealers as do not compete unfairly. It is not thought that this Bauer decision gives license to piratical dealers to cut prices so as to drive out their smaller competitors, thus ruining them and injuring us by unfair competition.

"While in the formal part of the petition filed by the Government there is a prayer for dissolution, as is usual, I am informed in all such cases, it is believed that full compliance with the main specific demands for changes of trade methods freely offered by this company will successfully meet all criticism and satisfy the trade at large and the Government.

"Aside from the economic principles which would be violated by such dissolution, it can clearly be shown that if the United States is to keep its lead in the photographic art which it has maintained for the last twenty years and meet competition in the markets of the world, the co-ordination of the manufacture of films, plates, papers and cameras must be continued. None except those intimately familiar with the art can realize the interdependence of these different articles as to changes and improvements. Qualities in plates influence results on paper. Changes in film influence changes in cameras, and so on; and no concern that is unable to furnish products in all of these lines, adapted one to the other, can hope to compete with the great foreign manufacturers who are straining every effort in similar directions. Color photography, which has been developed to a point where for the last six or seven years it has been possible for experts to obtain perfectly satisfactory results, has proved a commercial failure. Only a concern which has on its staff experts in all the various departments of the art can hope to bring this problem to a satisfactory solution commercially. By that I mean bring it within the reach of the ordinary Kodaker, who is not technically expert. The Eastman Kodak Company has spent already hundreds of thousands of dollars upon this problem, and it is partly the prospect in this line which led it to expend over one hundred thousand dollars in enlarging its research laboratory, which now has on its staff some of the best experts in the world. It is only a concern that has a varied output that could get the good out of such a laboratory.

"The Government has been engaged in the investigation of our business ever since October, 1911, and has gone most exhaustively into the history of the company and its methods since the inception of the business, and while we do not agree with its view of our sales policy, we realize that there is a chance for an honest difference of opinion upon any such question, and we are bound to say that the Government has been perfectly fair in the way it has conducted the investigation."

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

A Number of Bromide Toning Methods

The subject of bromide toning is again occupying a great deal of space in the European photographic press. In the *British Journal of Photography*, H. Soar brings forward a new method of single toning which is very simple in principle, although perhaps a little too lengthy in its present form for its practical application. He uses an acid solution of ordinary hypo. The formula he has used for two years, with practically good results, is: Hyposulphate of soda, one-half ounce; water to twenty ounces; to which add strong sulphuric acid, twenty minims. Into this bath the bromide print is placed for a period ranging from twenty to thirty minutes. It does not change color therein, but is then removed to water and washed till the desired tone is obtained. For one hour there is no change, but after that it progressively passes through brown black to the proper tint of a toned bromide. The results are said to be excellent. Allowing the prints to overlap one another, either in the bath or during the washing, causes irregular toning; but it is stated that if failures occur in this respect, a second immersion in the bath, followed by washing, will put matters straight. Furthermore, it is advised that vigorous prints be used, preferably those developed by amidol.

In a later letter to the same journal, Mr. Soar writes: "In point of fact, by the Soar process a bromide print can be toned right out in a bath of acid-hypo at a temperature of ninety to one hundred degrees in a few minutes. Here is the process as worked by the writer:

"The ideal print is one so exposed as to allow the action of the developer to proceed to a stop without becoming over-developed.

"The prints are fixed in a chrome-alum-acid-hypo bath, as described in the 1913 *British Journal Almanac*.

"From the fixing bath, prints are transferred to water and allowed to soak whilst

the toning bath is being prepared. It is made as follows:

Hypo ½ ounce

Water 1 pint

"This is heated to blood-heat, and twenty minims of strong sulphuric acid added thereto, into which the prints are at once placed and the solution kept heated at a temperature between ninety and one hundred degrees.

"To allow the liquid to get between the prints, the bath is rocked or the prints are turned about two or three times. In some eight to ten minutes they will be found to have acquired a rich, warm, brown tone. They are then placed in a wash-bath to remove hypo, the only washing necessary. If required to be glazed, they should be given a bath of chrome alum to harden the film.

"Between each batch toned a small quantity of acid is added, and occasionally hypo, to keep up the action of the bath; although, as the solution is so cheap and readily made, it is preferable to make up a fresh quantity of bath for each batch of prints.

"A stronger and hotter bath tones more rapidly, but the prints are not so well under control, whilst at the temperature of blood-heat gelatine is not materially softened.

"A print that has been dried before toning tones out more purple than one toned without drying.

"The developer I use is as follows:

10 per cent solution of

Diamidophenol 40 to 50 grains

Soda sulphite 1 ounce

Water 20 ounces

10 per cent solution of

ammonia .880 40 minims

Or soda hydrate, a few drops of a strong solution.

"For a print from a weak negative, the solution is restrained with a few drops of sulphuric acid. The ammonia accelerates the

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action, and at the same time renders the final tone of a print more purple than one that has been toned with a developer to which acid has been added.

"I have tried many brands of paper, and used other developers, but the results do not substantially differ from that described, other than that the tones vary somewhat in their character.

"In this toning process we have a simple, cheap and quick method of toning bromides to a rich brown or warm purple as required. The components of the toning bath are of a definite nature and regular in their action, and appear to meet all the requirements essential to the ideal process asked for."

Another way of obtaining a similar result is brought forward by Luther H. Desalme in the *Bulletin* of the French Photographic Society. He uses a solution made by mixing fifty grammes of sodium sulphide with fifty cubic centimeters of boiling water and adding thereto either six or twelve grammes of sulphur powder. The latter dissolves, forming a polysulphide. A print immersed in this solution gradually changes in tone until it reaches a warm sepia, requiring about thirty minutes, after which the print must be well washed.

The advantages claimed are gradual development of the final tone, very pure whites and comparatively little odor in the toning solution.

[I have tried a modification of this latter method. I possessed a bottle of ammonium sulphide that had been long exposed to light, was dark yellow and mostly changed to polysulphide. Twenty drops of this to a pint of water toned three bromide prints in about twelve hours. The color was excellent when the print was good. The solution deposited much fine sulphur, but this was easily removed from the print. The odor was very slight.—H. D'A. R.]

Yet another method is described by T. H. Greenall in the *British Journal of Photography*, of which the following excerpts will give sufficient directions.

"It does not appear to be generally known that in permanganate of potash acidified with hydrochloric acid we have an ideal halogenizer for use in the indirect method of sulphide toning of bromide prints. Perhaps the reason for this neglect is that, as usually employed, permanganate causes staining, and this necessitates the use of an after-bath of

acid sulphite which, besides being troublesome, may easily act detrimentally on the halogenized image and spoil the final depth and color of the print. If, however, a formula is employed which will cause a minimum of staining, and the use of the acid sulphite bath is postponed until after sulphiding, then the permanganate is an ideal bleacher, as the tones it gives are very fine. Experiments with five different well-known makes of bromide paper show that the following is a suitable formula to employ:

A: Potassium permanganate ..40 grains
Water20 ounces
B: Strong hydrochloric acid
(B. P. 31.8 p. c.)..... 3 ounces
Water to make.....20 ounces

"For use, take six ounces of water, add one ounce of B, and then add one ounce of A. The total makes eight ounces of working mixture, which should bleach a normal print in about one minute. A stronger solution may be used in which the quantities of A and B are double those given. Both stock solutions keep indefinitely in stoppered bottles, but the working mixture must be made up at the time of using, as it will not keep, and must be discarded as soon as it shows signs of discoloration and muddiness.

"The image usually disappears entirely, unless an excess of A solution has been employed, in which case a brown image is formed. If the quantity of working mixture taken is insufficient to complete the bleaching, it is best to throw it away and take a fresh, slightly stronger portion. Any pink tinge or brown discoloration may be neglected, as it will disappear in the sulphide of soda by the time the image is properly sulphided, and it is not necessary or advisable to wash between bleaching and sulphiding, but should there be any final brown tinge left in the paper after sulphiding, the prints may be rapidly cleared by placing them without washing in a one per cent solution of oxalic acid to which a few crystals of sulphite of soda have been added. My experiments with varied classes of prints, weak and strong, show that with permanganate used as above the best possible result may be relied on from any given print, provided, of course, the sulphide solution is not stale and has been made from clean, dry crystal sulphide. A grain of sulphide to the ounce of water is strong enough for the working bath.

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"An advantage, however, of this permanganate bleacher, of enormous value in special cases, is that prints may be put straight from the hypo into the acidified permanganate solution after a slight rinse in one or two changes of water, the only difference being that more of the permanganate solution will be required. Thus, if eight ounces of the working mixture is sufficient for a given 12x10 print, which has been washed, say, five or ten minutes in frequent changes, fifty or sixty ounces might be required for the same print if taken practically full of hypo. In practice, a few minutes' washing would always be given if possible, and this makes a print in all respects as workable as one which has been washed the usual hour in running water. Trials have been made with both acid hypo and plain hypo, and in no case is there any loss of detail or vigor, whilst the colors obtained are identical, whether the print is taken straight from the hypo or given an intermediate washing of one or two hours' duration. The method of working a print which contains hypo is to treat it with the acidified permanganate working mixture as above in successive portions. The first portion will probably quickly lose color as it goes for the hypo. It must be discarded and a fresh portion used. If much hypo is present, the stronger permanganate bath may be used. A minute or two should suffice to eliminate the hypo and bleach the print, when it may be at once put in the sulphiding bath. The only danger of failure appears to me to be that of oxidation of any brown stain due to exposure to the air, but so far I have not had any trouble in getting clean prints with pure whites, except when the strength of A, or permanganate solution was overdone."

Still dealing with the same subject, "Practicus," who has been writing a series of articles in the *British Journal of Photography*, after excellently describing the two-solution procedure, mentions various possible modifications which are worth practicing. Amongst others, he gives the following formula for a fine cold sepia. Immerse the print for six minutes in a mixture of equal parts of ten per cent ammonium bromide and ammonium bichromate. Rinse twice and bleach in five ounces of ten per cent ammonium bichromate, five ounces ten per cent ammonium bromide, ten ounces of twenty per cent ferricyanide of potassium and two

drams of ammonia. Wash and tone in the usual bath. For a rich, warm sepia, it is directed that the same procedure be followed except that the mixed bath consists of equal parts of a ten per cent solution of ammonium bichromate and strong nitric acid, one minim to the ounce.

In the *Amateur Photographer*, J. A. Paterson writes upon a method, devised years ago by Mr. Mortimer, of using pyro for securing warm tones on bromide paper by direct development. He has found that excellent results may be obtained by the following formula:

A: Pyro	1 ounce
Sulphite soda	6 ounces
Citric acid	2 drams
Ammonia bromide	2 drams
Water to	20 ounces
B: Carbonate soda, crystallized	3 ounces
Sulphite soda	2 ounces
Potassium bromide	2 drams
Water to	20 ounces

To use, take one drachm of each to five ounces of water. To obtain still warmer tones, the exposure must be increased still further and the developer reduced one-half in strength. Still lighter tones are obtained by further prolongation of exposure and dilution, but the later and extreme forms are not advised.

The New Breon-Randabel Stereoscopic Color Film

In the first number of our new volume, T. Thorne Baker, F.R.P.S., foreshadowed rapid progression in the field of color cinematography during the present year. His prophecies have every possibility of fulfilment, for we hear of a remarkable new development in this branch of motion photography from Paris, where M. Louis Manclaire has recently perfected the "Manclaire-Breon-Randabel Tetrachrome Process, which is described as "the most complete solution of the color problem yet discovered." It is stated that the films neither require a special "projector" nor a specially trained operator, and that their exhibition is quite as simple a matter as the projection of ordinary black and white films. In all probability a demonstration of the new process will be given in London at an early date. M. Manclaire is also experimenting with a new process for imparting a stereoscopic effect to motion pictures, which will be ap-

plicable both to the "Tetrachrome" films and to ordinary pictures.

Recently we attended a private view of the new "Chronochrome" process of color cinematography at the London "Coliseum." The pictures shown on that occasion clearly demonstrated that this branch of work has vast possibilities, and has recently made enormous strides. From purely an artistic standpoint the process, in our opinion, has not yet been equaled. Natural tints were reproduced with remarkable fidelity. Up till the present time it has proved a difficult matter to obtain the correct shades of violet and mauve, but Mons. Gaumont has quite overcome this difficulty. "Chronochrome" pictures have a much softer appearance than any color films hitherto obtained, and the strain upon the eyesight is reduced to a minimum. These wonderful results are secured by the simultaneous photographing and ultimate projection of three photographs containing the primary color values in the field before the lens. Hitherto it has been found impossible to accurately superimpose the three-color-value pictures, each one being projected through its respective color filter. In "Chronochrome" this difficulty has now been entirely surmounted.

Following upon this demonstration, we hear from a firm of patent agents that they have a most important invention on hand with relation to color cinematography, which they believe will entirely supercede the present commercial efforts, and they make this statement "with the full knowledge of what has hitherto been achieved." For fuller particulars we have to wait a little longer, as "the subject is still *sub rosa*, but the developments will possibly be very rapid, as they are close at hand."—*Amateur Photography*.

Making a Graduated Background

It is an easy matter, writes E. Moore in *Photography and Focus*, to make a plain background by stretching some sheeting on a frame and giving it one or more coats of distemper; but I was very much puzzled how to make a graduated ground, until a friend told me of the following method, which has proved perfectly satisfactory. A piece of sheeting of a suitable size having been stretched on a frame, it is well wetted with water and left for a few minutes for the water to permeate it. Some fabrics seem to

be very repellent at first, and the water may require rubbing in with a sponge. Vegetable black and whiting are the colors which may be used, and these are finely powdered—the whiting will have to be very dry—and mixed together. Three or four lots will be needed, starting with almost plain black, then dark grey, grey, and light grey. Each of these should be well mixed with about twice its bulk of powdered dextrine; the best way of mixing being to put the powder in a sieve and dust it on to a sheet of newspaper. The background is then laid flat, and the powders are dusted on to it in exactly the same way, graduating them by thinning out the darkest where it comes against the next dark, and so on. When this has been done, a stiff brush of fairly large size, say an inch in diameter, is taken, and starting on the light side the powder is well brushed in to the wet fabric. This not only makes a permanent job of it, but also helps to give a nicely graduated effect. A little more of the powder can be dusted on where it is wanted at this stage; but it is best to endeavor to get the effect as much as possible by the first application of the brush. I have no doubt other powder colors can be used, but have not tried them. The backgrounds made in this way can be rolled up when once the fabric is quite dry.

Moving Pictures for the Blind

The above headline might, at first sight, appear as a grim joke, but it is in truth the caption of an article in *Apollo* for February, wherein it is stated that a Parisian, Dr. Dus-sand, has produced an instrument of this description. It consists of an electrically-driven plate, carrying on its surface a series of pictures in relief, arranged in the same manner as are the components of a kinematograph film. That is, each picture represents a phase of a movement. When this plate is rotated under the fingers of the blind subject it is said to give rise to the sense of varying action such as the alternation of images evokes in the eye. But, and the "but" is a large one, if it is not a hoax, it is evident that only one observer could palpate the revolving disk at the same time, and even then would need long training to learn how to interpretate what must amount to new sense impressions.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Negatives for Enlarging

Any man who does developing and printing will tell you that the amateur's one great fault is under-exposure, the one great drawback to his efforts to produce good work for his customers. And the worker who does his own developing and printing is nearly as likely to err in the same direction. He does a little better, he has the ill effect of under-exposure brought a little closer home through developing his own plates or films, yet he rarely profits to the extent he should by the knowledge gained. This is perhaps due to the fact that with our present-day papers in their variety of grades one can humor these under-exposed negatives to an extent impossible in the days of printing-out papers. But what I am getting at is this: With the small, miniature cameras coming so rapidly into favor, the amateur is made more dependent upon enlarging processes, and enlarging does not countenance under-exposed negatives. A good enlargement, one reasonably free from granularity and muddy expanses, cannot be secured from an under-timed negative. The user of a small camera, the worker making small negatives for subsequent enlargement, must give his exposures full time. He should not be afraid of over-exposure. The over-exposed negative can easily be strengthened by the simple process of intensification, should one really fall into the error of exposing long enough to get a film or plate that does not develop to sufficient density. But an under-timed negative is only made more objectionable as to results by intensifying. Happily, the miniature camera uses a lens of such short focus that its larger stops give sufficient depth for almost all subjects, so that one can use a larger aperture than he would employ for the same subject when using a larger camera. This will enable one to double the exposure in a majority of cases, not by doubling the actual time of exposure, but by using a size larger stop that requires only half the actual time. Try making, or

having made, two bromide enlargements, one from a fully timed negative and the other from one that has been under-exposed. The two prints will convince any one of the necessity of taking this matter of full exposure very deeply to heart.

Drapery for Nymph-Like Figures

One of our Oregon correspondents asks for some suggestions as to the diaphanous drapery sometimes used in making such figure studies as are generally given some such title as, *The Water Nymph*, *The Spirit of the Sunshine*, and the like. A few years ago a lady worker in England, one who has achieved much success, gave the following instructions in an article that graces our scrap-book. She said: "Rose pink, mauve, or buttercup color are good shades; in fact, anything except pure white. Any thin material free from pattern or spot is suitable; mercerized muslin, butter muslin, chiffon, lawn, voile, nuns-veiling, and the like. To make the dress, take two pieces of forty-four-inch material, about sixty inches in length. One of these should be cut into two, diagonally, and joined, one on each side of the uncut piece. Let the widest parts come at the foot to form two gores, so that the bottom of the skirt comes a good deal wider than the upper part. This makes the front of the dress. Cut another length about seventy inches for the back, and join front and back together so that the only seams will be at the sides, for these are rather inclined to show. Cut the bottom even and turn up about three inches for the hem, which can be embroidered, stenciled, or made of patterned material. Put some short sleeves in, and cut an opening of ten inches down the middle of the back or front, and draw up at the neck with a ribbon, or pleat into a velvet band. I like to leave a generous amount of dress, very full and ample around the hem, and one or more gores

can be added to the back in the same way as the front before running together. A golden yellow dress I use is eight yards around the hem, and a rose-pink one twelve yards." This description may seem a little complicated to the male mind, but I have the assurance of a lady photographer that it is all quite simple, and involves only the most elementary dressmaking skill.

The Amount of Alkali

A New York correspondent writes to ask if he can safely assume that a developer formula that gives him satisfaction can be changed by substituting another developing agent, still retaining the same quantities of all the chemicals. He can of course change any developer formula in this way and no doubt secure a workable solution, but its good quality will be doubtful. Some years ago, Von Huble calculated the amount of caustic soda required to produce phenolates with the several developers then in use. We published the table at the time, reprinting it from *Das Atelier*. The amount of caustic soda giving the best results with ten grammes of each developer is shown in the first column. The second column shows the amount of developer to be used in every hundred cubic centimeters of solution. If one desired to use other alkalis, these figures in the first column must be multiplied by the factors as follows: Caustic potash, 1.4; potassium carbonate, 10; sodium carbonate, dry, 8; and sodium carbonate, crystals, 16. Amidol requires no alkali and the caustics should not be used with pyro or metol.

	Grammes	Grammes
Pyrogallol	9.5	0.3 to 0.6
Pyrocatechin	7.2	0.6
Hydroquinone	7.2	0.5 to 1.0
Glycin	4.3	1.0
Audrol	4.2	1.0
Paramidophenol ...	2.8	0.4 to 0.7
Metol	2.3	0.6
Eikonogen	1.5	0.8 to 1.5
Diogen	1.2	1.2
Amidol	·	0.4 to 0.8

I have thought it better to give the original figures in grammes and allow the reader to translate them into our own weights should he not be using the metric system. The table shows how wide a variation there

is between the amounts of alkali required for the best results with different developers. And it clearly shows that one can hardly substitute a certain given amount of one developing agent for another, in a given formula, and yet expect to secure the best results.

Developer for High-Speed Work

One of our Michigan subscribers, Louis R. Todd, sends in a formula which was furnished him by the Multi Speed Shutter Company for developing high-speed exposures on plates or film. Two solutions are made up as follows:

- A: Water, distilled30 ounces
 Sulphite of soda, anhydrous.... 2 ounces
 Edinol 2 drams
 Hydroquinone 2 drams
 B: Water30 ounces
 Carbonate of soda, anhydrous.. 2 drams

These should be used at a temperature of sixty-five degrees. To develop films in a tray, immerse in the B solution for one minute, agitating the film during that time; then immerse in solution B for a like period, agitating as before. Then rinse, fix and wash. For plates, increase the time to one and one-fourth minutes in each solution. The developer works best kept separate as advised, but for tank development they may be mixed in equal parts and then diluted four times with water. This should also be used at a temperature of sixty-five degrees, increasing the time of development as the exposures are shorter. The following table is one I use to determine length of development:

1-500 second exposure.....	.....Develop for 8 minutes
1-800 second exposure.....	.....Develop for 10 minutes
1-1000 second exposure.....	.....Develop for 13 minutes
1-1200 second exposure.....	.....Develop for 15 minutes
1-1500 second exposure.....	.....Develop for 16 minutes
1-2000 second exposure.....	.....Develop for 17½ minutes

This developer will produce good printing negatives from plates or films that have really been under-exposed several times less than would be required for an ordinary developer.

CLUB NEWS AND NOTES

Club Secretaries and others will oblige by
sending us reports for this Department

California Camera Club

Tuesday evening, May sixth, George H. Reddy favored our Club with a demonstration on Intervention, or the After-Treatment of Portrait and Landscape Negatives, showing how, by after-treatment of the negative, prints might be made to express the harmonious impression or feeling the subject created in the mind of the operator and how a power of selection and arrangement is secured almost equal to that enjoyed by the painter.

Tuesday evening, May twentieth, L. J. Tyler, assisted by Horace Hirschler, gave a very interesting demonstration on the Gum-Bichromate Process.

Two weeks later, on the evening of June third, Dr. Percy Neymann gave a lecture on Stenopaism or Lensless Photography, his talk being illustrated by lantern slides made from pinhole negatives.

Club members and friends to the number of one hundred and fifty were the guests of Trewavas, Lee and Company on Sunday, May twenty-fifth. We all made ourselves pretty much at home on the beautiful six thousand acre tract of land owned by this company. The cordial hospitality extended us in the way of automobile rides and a glorious feast, was most thoroughly appreciated. The results of the photographic inspirations that seized our members on that day, now grace the walls of our Club. The general results, particularly in the matter of composition, show a marked improvement over that of the work done on any previous outing.

Mr. Kemp, our former president, has just returned from the Grand Canyon, having had a most successful trip, both photographically and otherwise. Mr. Strobel returned from the Yosemite the other day with six dozen 5x7 negatives, all most successful exposures. Another success is that of Mr. Wise, who recently stopped a messenger boy

with his new fast lens, being accordingly quite elated over his purchase.

At our last regular monthly lecture, held Thursday evening, May twenty-second, Willis G. Barnes lectured on The Past and Present of New York City, or Wonders of the Metropolis. The topic seemed to be one of popular favor, as standing room was at a premium, with a corresponding marked improvement in the receipts of our box office.—E. R. Shirley, Corresponding Secretary.

Seventh Annual Meeting M. A. A. A.

From the high standard of the work shown it can have been no easy task for the judges to select and arrange the prints at the seventh annual exhibition of the M. A. A. A. Camera Club, recently held at the Association's club house, Peel Street.

The day has passed when those who argue that the press of a bulb cannot result in a production which can be construed as art. At the show there was much that charmed—some sharper in detail than others, sun-splashed boughs and trunks of willow over a dried water course where the sunlight spatters shadows on the baked mud—others again having elusive charm of mist, heat-hazed distances and the somber tone of wind-swept country under heavy skies.

A detailed review on the strength of a hurried survey would work avoidable injustice. A few prints made instant appeal, while all possess the charm which develops with more studied examination.

The following is the list of prize winners:

Class A, Figure Studies. First prize, Albert Kelly, Eatonia Camera Club, Toronto; second prize, J. H. Stockton, Montreal.

Class B, Landscapes. First prize, W. S. Fife, Toronto Camera Club; second prize, Charles Macnamara, Arnprior, Ontario.

Class C, Waterscapes. First prize, Thomas Farmer, Scottish Photographic Federation, Montreal; second prize, Dr. D. J. Ruziska, New York.

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Class D, Genre. First prize, Thomas Farmer, Scottish Photographic Federation; second prize, L. M. A. Roy, Lacrosse, Wisconsin; green class, C. F. G. Johnson, M. A. A. A. Camera Club, Montreal.

Honorable Mention. Class A, B. F. Langland, Wisconsin Camera Club, Milwaukee; Carl Rau, Lacrosse, Wisconsin; J. H. Stockton, Montreal.

Class B, W. R. Allen, M. A. A. A. Camera Club, Montreal; R. Y. Eaton, Eatonia Camera Club, Toronto; J. H. Stockton, Montreal.

Class C, Charles Rettic, Liverpool, England.

Class D, G. P. Kimberly, Belding, Michigan; L. M. A. Roy, Lacrosse, Wisconsin; J. H. Stockton, Montreal; J. J. Vaughan, Eatonia Camera Club, Toronto.—*Montreal Gazette*.

Camera Workers of Evansville to Organize

Evansville has a number of camera workers who have shown great promise of artistic abilities and it is the intention of these kodakers, inspired by the work of Wilbur H. Porterfield, of Buffalo, as shown at the studio of R. Morris Williams in Main Street, to form a camera club for mutual help and inspiration.

They will hold exhibitions and promote the art in various ways. May Evansville develop her Porterfield. Mr. Williams has offered the use of his studio as headquarters and will be only too glad to give them the benefit of his experience and knowledge. Women will be eligible as well as men. All amateurs wishing to perfect their knowledge of the higher branches of photography may freely take their troubles photographic to Mr. Williams, who will put them right, and all those wishing to become members of the club will communicate with him.—*Evansville Journal-News*.

The New Cleveland Club

We have been favored with a card outlining the proposed photographic organization that about twenty leading amateurs and professionals are trying to launch in Cleveland. Quoting from the card: "It is proposed to incorporate this Club to provide a meeting place for those interested in photography of all kinds and a place where all facilities for developing and printing, enlarg-

ing and copying will be available at all hours every day of the week. Where exhibitions can be held and demonstrations of different processes and methods made before the members and their friends. The dues will be two dollars per month, four dollars to be paid upon admission, four dollars on the first of the following month, and two dollars on the first of each succeeding month, until twenty-four dollars has been paid. Five dollars of this sum is to pay for one share of stock in the Company, the balance to be the dues for the first year."

Any inquiries regarding the Club should be addressed to A. D. Williams, Box 102, Cleveland, Ohio. The list of names of those interesting themselves in this new organization comprises many of the best known workers in Cleveland, and residents of that city should avail themselves of the opportunity presented to join this organization, as it will no doubt be most active and enthusiastic.

Pictorial Prints by W. H. Porterfield

A notable collection of thirty carbon prints by Wilbur H. Porterfield, the eminent pictorialist of Buffalo, was secured by Mr. Williams for the month of May. The pictures having arrived direct from the Toledo Art Gallery, where they were shown the past month. From Evansville they go to Chicago, where they will hang during the month of June in the Art Museum. Mr. Porterfield is a world-renowned amateur and his prints have been exhibited in all the art centers of Europe, receiving many first awards and highest praise from European art critics. The artistic work of Mr. Porterfield should appeal to all lovers of beautiful pictures and especially to amateurs, for one may get a splendid idea of the possibilities of the camera by seeing these pictures. The small original print is shown on the back of the enlargement and the comparison with the finished picture is interesting. After viewing these pictures, the amateur will leave with inspired realization of the possibilities of his Kodak. The beautiful colors secured by the carbon process give the effect of paintings; in fact, the carbon print is practically nothing more than a painting in monochrome (the image being composed of the artist's pigments)—the beholder receiving the impression of color.—*Evansville Journal-News*.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smythe, 1160 Detroit St., Denver, Colo.

George E. Moulthroppe, Director Lantern Slide Division, Bristol, Conn.

Edward B. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

MEXICO.

Vice-President—Jose Ramos, 2a de Morelos 44, Morelia, Mich., Mexico.

Album Director—J. Jesus Martinez, Ap. 5, Morelia, Mich., Mexico.

CANADA.

Album Director—C. H. Foster, Kerwood, Ontario, Canada.

Secretary—J. A. Waddell, Kerwood, Ontario, Canada.

ALBUM DIRECTORS.

Alabama—Richard Hines, Jr., 155 State St., Mobile.

Alaska—P. S. Hunt, Valdez.

California—Dr. G. P. Flores, 409 Elkan-Gunst Building, San Francisco.

Colorado—O. E. Aultman, 106 E. Main St., Trinidad.

Connecticut—George E. Moulthroppe, Bristol, Florida—Capt. E. S. Coutant, Lock Box 73, Stuart.

Georgia—L. O. Surles, 231 E. Pine St., Atlanta.

Idaho—Eugene Clifford, Weippe.

Illinois—George A. Price, 1102 West Main St., Urbana.

Indiana—H. E. Bishop, 1706 College Ave., Indianapolis.

Iowa—C. E. Moore, Eddyville.

Kansas—H. E. High, Box 72, Ellsworth.

Maryland—E. G. Hooper, 218 East 20th St., Baltimore.

Massachusetts—John Mardon, 161 Summer St., Boston.

Michigan—W. E. Ziegenfuss, M. D., 327 West Hancock Ave., Detroit.

Minnesota—Leonard A. Williams, St. Cloud.

Mississippi—George W. Askew, Jr., 211 34th Ave., Meridian.

Missouri—Wharton Schooler, R. F. D. No. 2, Eolia.

Nebraska—Miss Lou P. Tillotson, 1305 South 32d St., Omaha.

New Hampshire—Mrs. A. Leonora Kellogg, 338 McGregor St., Manchester.

New York—Louis R. Murray, 17 Hasbrouck St., Ogdensburg.

New Jersey—Burton H. Allbee, 103 Union St., Hackensack.

North Dakota—Jas. A. Van Kleeck, 619 Second Ave., North, Fargo.

Ohio—J. H. Winchell, R. F. D. No. 2, Painesville.

Pennsylvania—L. A. Sneary, 2822 Espy Ave., Pittsburg, Pa.

South Dakota—C. B. Bolles, L. B. 351, Aberdeen.

Texas—J. B. Oheim, P. O. Drawer M. Henrietta.

Utah—John C. Swenson, A. B., Provo.

West Virginia—William E. Monroe, Box 298, Point Pleasant.

NEW MEMBERS.

3673—J. B. Pratt, Garnett, Kan. Lantern slid

3674—R. F. Moffitt, Mellette, Okla. Class 2.

3675—Otis T. Bartels, Carlton, Ore. Class 2.

3676—C. R. Lowe, Benedict, Nebr.

3 $\frac{1}{2}$ x4 $\frac{1}{4}$, 9x12 cm. and enlargements, developing paper, of some Philippine stuff, child studies, nature studies and genre; for anything of interest. All work sent and received on approval. Class 1.

3677—E. H. Moffet, Tulare, Cal.

3 $\frac{1}{4}$ x5 $\frac{1}{2}$, developing paper, of streets, scenery, and home portraiture; for the same. Prints only Class 1.

3678—Frank Chidester, Hotel Eastland, Benton Harbor, Mich.

2 $\frac{1}{2}$ x4 $\frac{1}{4}$, various papers, of views of Benton Harbor, and St. Joseph, Mich., later will have Niagara Falls and Detroit; for old ruins, street scenes, and miscellaneous. Class 1.

3679—O. R. Junkins, Box 204, Lead, S. D.

Class 2.

RENEWALS.

403—Lou P. Tillotson, 1305 So. 32nd St., Station B, Omaha, Nebr. Class 2.

1771—Burton H. Allbee, 729 East 22nd St., Paterson, N. J.

Lantern slides only. Does not care to exchange without previous correspondence. Class 1.

1783—William R. Ordway, Box 112, Milton-on-Hudson, N. Y.

4x5 and 5x7, developing paper, of post cards and prints of landscapes; for post cards and prints of general subjects. Class 1.

2274X—E. J. Towne, South Dayton, N. Y.

Post cards. Desires only first-class work; all post cards received and sent on approval. Class 1.

2498—B. B. Sprout, 516 W. Fourth St., Williamsport, Pa.

3 $\frac{1}{4}$ x5 $\frac{1}{2}$, 4 $\frac{1}{4}$ x6 $\frac{1}{2}$, and 5x7, of miscellaneous subjects, some speed work; for the same. Class 1.

2984—C. M. Seymour, 1186 Park St., West Hartford, Conn.

Will exchange prints up to 5x7 of army views, landscapes, mountains, children and other New England scenes; for foreign types, especially Chinese. Class 1. I would buy foreign type photos from members.

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- 3374—George M. Nicholson, Zuni, Virginia.
3¼x5½ and enlargements to 8x10, developing paper, of landscapes and farm scenes treated in a pictorial manner; for any good pictorial subjects and desire to exchange especially with foreign members. I send out good work and desire only good work in return. Post cards or prints. Class 1.
- 3375—Harvey G. Grofe, Boyertown, Pa.
Class 2.
- 3660X—R. P. Bates, Box 153, Corsicana, Tex.
Two exchange notices were published for this member in June through an error and two numbers given him, the above being the correct one, No. 3673 being cancelled.

CHANGES OF ADDRESS.

- 93—Dr. C. H. Gardner, U. S. Marine Hospital, Buffalo, N. Y.
(Was Detroit, Mich.)
- 2541—Major St. George Elliott, 762 Tompkins Ave., Fort Wadsworth, Staten Island, N. Y.
(Was Washington, D. C.)
- 2886—Sadie L. George, 1355 N. Water St., Wichita, Kans.
(Was Ferndale, Colo.)
- 2939—Max H. Lorenz, Rockmart, Ga.
(Was Gainesville, Ga.)
- 3118—E. W. Cochems, R. F. D., Hynes, Cal.
(Was Los Angeles, Cal.)
- 3342—Warren W. Willison, 810 Main St., Davenport, Iowa.
(Was 710 Main St.)
- 3346—R. G. Johnson, Whitman, Nebr.
(Was Elva, Nebr.)
- 3399—Gilbert H. Zavitz, R. F. D. No. 5, St. Thomas, Ont., Canada.
(Was Sparta, Ont., Canada.)
- 3464X—Miss Josephine Fletcher, 60 W. Schiller St., Lincoln Park Station, Chicago, Ill.
(Was 1246 La Salle Ave.)
- 3476—Miss Mary E. Spence, New Richmond, Wis.
(Was Anamoose, N. D.)
- 3477—G. L. FitzWilliams, care D. M. Buswell, R. F. D. No. 1, Lewiston, Minn.
(Was Ely, Minn.)
- 3555—Jesse A. Bunch, Gering, Nebr.
(Was Loveland, Colo.)
- 3581—Fred E. Taylor, R. F. D. No. 1, Carson, Iowa.
(Was Oakland, Iowa.)
Is now prepared to exchange 3¼x5½ prints on developing paper instead of 2¼x3¼.

WITHDRAWALS.

- 2049X—Mrs. Vercia Louck, Kalona, Iowa.
Cancelling exchanges indefinitely because of poor health.
- 2087—W. J. Luth, Plymouth, Wis.
Cannot make exchanges until September first.
- 3133—A. E. Davies, 2954 Linden Ave., Berkeley, Cal.
On account of lack of time.
- 3567—Thaddeus Hallinan, Winter Haven, Fla.
On account of lack of time.
- 3655—S. W. Giere, 714 St. Olaf Ave., Northfield, Minn.
Too busy to exchange during the summer months.



OUR BOOK SHELVES

"Women as World Builders"

A handsome little book, cloth bound, gold lettered, carries the above title with the subtitle: "Studies in Modern Feminism." Its author, Floyd Dell, gives a most able presentation of a man's views of the woman's movement; a subject well in the eye of the public at the present moment. Chapters are devoted to the Feminist Movement, Charlotte Perkins Gilman, Emmeline Pankhurst, Jane Addams, Olive Schreiner, Emma Goldman, and any others, all of whom are most ably treated as to their aims and achievements. The book answers the question as to what the world would be like if women become the dominant force, and answers it in a new and striking way. Published by Forbes & Company, Chicago, Illinois. Price seventy-five cents.

"Annuario 1913 Della Fotografia"

Such of our readers as are conversant with the Italian language will do well to order a copy of this most excellent annual. It has over six hundred pages, replete with photographic information and embellished

with several fine illustrations in the form of bromide prints. It is edited in a most capable manner by Doctor A. Rossi, and published by *Il Corriere Fotografico*, 8 Piazzale Magenta, Milano, Italy. The publisher's price is two liras, which, including postage, would make it necessary to send about fifty cents for a copy.

"The Man and the Woman"

This is the title of a most interesting book in which the author, Arthur L. Salmon, discusses in a most refreshingly wholesome spirit, the joy, the beauty, the necessity and the need of us all for our share of that love and friendship that is so all essential. It sounds a note that will call forth a responding harmony in the heart and mind of every reader so fortunate as to have the pleasure. The contents are suggested by a few of its many chapters, namely: Does He Understand Her? Does She Understand Him? Loving the Unreal, Ideals of Marriage, The Third Person, Two Codes of Honor, The Unmarried Life. Published by Forbes & Company, Chicago, Illinois. Price seventy-five cents.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

"Afga" Products in Canada

Messrs. Hupfeld, Ludecking & Company have been made Canadian agents for all "Afga" photographic chemicals, and Canadian photographers, amateur and professional, are requested to write Messrs. Hupfeld, Ludecking & Company, 3 St. Helen Street, Montreal, for particulars regarding the "Afga" products.

Reported by William Wolff

The Eastman School of Professional Photography brought over three hundred photographers to the city from all sections of the State. It was held May twenty-seventh to twenty-ninth, inclusive.

John Hall, of San Luis Obispo, promised to be in attendance, but a billiard match was on and he could not get away.

Frank Aston, of the same town, is doing some remarkable work in the panoramic line.

R. W. Horne, of Salinas, has recently made decided improvements in his place.

John O. Tucher and wife, of San Jose, expect to take a six weeks' auto trip soon; their regular annual outing.

Webb, the popular supply man of San Jose, has just installed another new and greatly improved finishing department.

Robers & Horwarth, of the same city, have greatly increased their business in their new location.

H. G. Trouts, of Salinas, declares business was never better. He now has a life partner and that may account for his rosy view of the situation.

L. E. Sherwood, of Stockton, was a recent visitor to the city.

William Wolff, Wolff & Dolan, manufacturers of Probus, will attend the National Convention at Kansas City, July twenty-first to twenty-sixth, inclusive.

Mr. Edgeworth, formerly with the Bausch & Lomb Company, and recently with the Honolulu Photo Supply Company, is now associated with R. J. Baker, of the Home Studio in Honolulu, doing a general com-

mercial and portrait business. We wish him all success in his new venture.

"Dick" Towers has taken over the interest of Mr. Gwynn in the Gwynn & Towers Company and has made many changes in the plant. The business will be known as The Towers Company henceforth.

Will Buy Twenty-Four Unusually Good Photographs

Here is an opportunity to make money by offering Ansco Company your choicest negatives. For their fall and winter national advertising they will need twenty-four very fine pictures, not later than September first, 1913. The one that best suits their purpose will be bought for two hundred dollars. For the other twenty-three they will pay prices ranging from one hundred and fifty to ten dollars, according to their advertising worth.

Photographs submitted must reach Ansco Company, Binghamton, New York, not later than September first, 1913.

This purchase offer is a business transaction between you and Ansco Company. They need the pictures to illustrate the Ansco Camera advertisements in the national magazines.

There is another idea besides their desire for unusually fine pictures for illustrating their advertisements. They want you to realize how profitable you can make your camera, combined with the pleasure it affords.

To intensify your interest in making pictures for profit, full credit will be given in every Ansco advertisement in which a purchased photograph is used. Think what that alone means in presenting your photographic ability before publishers and advertisers.

Quoting from the announcement, the company says:

"We want natural scenes—made in the house or, on an outing. We do not want constrained poses, nor pictures that are manifestly made striking by unnatural lighting effects. We have no interest in pictures in which professional models and

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painted backgrounds lend an air of artificiality.

"For instance, photograph a bit of woodland, or meadow, or lake, or shore; a grouping of children, or a mother and child, or a child alone; a family pet, or a bit of still life, genre pictures of all kinds. The keynote is simplicity, beauty, or originality.

"Get the spirit of the artistic, not freaky; simple, not complicated—just the sort of pictures any one may take if they have a good camera, film or plate, and paper—an unusually pleasing subject, and an appreciation of the beauty of natural rather than artificial effects. Such photographic work is often found among 'snapshot' negatives. Look yours over.

"To be eligible in this matter it is not necessary, or required of you, that Ansco supplies or Ansco cameras be used in the production of your exhibits. To enable us to keep a proper record of results, however, kindly state the kind of camera, film and paper you employ.

"Submit mounted prints—not negatives—of pictures you have for sale. If we buy the picture, we will ask you to send the negative later. Prints should be strongly wrapped for mailing. If you send prints or negatives by any except first-class mail, the letter must come to us under separate cover, and under letter post. If the package is sent by express, the letter may be enclosed.

"Negatives we purchase (showing likenesses) must be accompanied by written permission from the subjects, allowing us to use them for advertising purposes. So long as you know that such permission will be granted, the release need not be forwarded when prints are submitted, but may be sent us at the time we make purchase."

Address Department X, Ansco Company, Binghamton, New York.

"Dark-Room Pointers"

The above is the title of a neat little pamphlet that the Central Dry Plate Company are sending out to dealers for distribution, together with revised price list of the firm's Comet, Special, and Special Non-Halation plates, with their new Special XX and Special Home-Portrait plates added. Another list gives particulars of the firm's

new Color Value and X-Ray plates. The first named pamphlet contains much valuable information and our readers should be interested in the last named new plates. Should your dealer not have these pamphlets, copies will be gladly sent free on request by the Central Dry Plate Company, 1811-1825 Arsenal Street, St. Louis, Missouri.

Six-Three Kodaks

The 1913 additions to the Kodak line which, in our opinion, should have the strongest appeal to the advanced amateur, are the Six-Three Kodaks. These instruments certainly represent the maximum of efficiency at the minimum of expense.

The regular No. 1A, No. 3 and No. 3A Kodak models have been equipped with an anastigmat lens, specially designed for this particular use, by the makers of the well-known Cooke anastigmat lenses. This lens, which is known as the Cooke Kodak Anastigmat, works at a speed of f-6.3 and is fitted in the popular Compound shutter. In the No. 1A and No. 3 sizes, the highest speed of the shutter is one two hundred and fiftieth second, while with the No. 3A, exposures may be made in one two hundredth second. The shutters are fitted with antinuous release, which is much more positive in its action than the rubber bulb and tube.

It is in the lens equipment of these Six-Three Kodaks, however, that one really finds their great efficiency. While the Compound shutter is an advantage because of its greater speed, this would not be true were it not for the speed of the lens. The Cooke Kodak Anastigmat is a lens of the very first quality, fully corrected for definition and flatness of field, and with sixty-one per cent more speed than the ordinary rapid rectilinear lens working at f-8.

The greatest advantage with such a lens is on dark days when the nature of the subject makes it absolutely necessary to make instantaneous exposures. The f-6.3 lens will give perfect definition at the largest opening and a fully timed negative under conditions where the rapid rectilinear would give negatives that would be fully sixty per cent under-timed.

The No. 1A, No. 3 and No. 3A Six-Three Kodaks are listed at thirty-eight, forty and fifty dollars, respectively, which places them within the reach of many amateurs who

NOTES AND COMMENT

have wanted a very high-grade equipment, but felt they could not afford it. The 1913 Kodak catalogue may be had from your dealer, or will be mailed free on request by the Eastman Kodak Company, Rochester, New York.

Equip Your Studio for Work at All Times

Artificial light is rapidly replacing daylight for studio work. The Victor Studio Flash Cabinet seems to combine nearly all of the desirable features. It enables you to see and arrange your lighting, adjust the angle or height of light, and make instantaneous exposures. Write for descriptive folder to James/H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago.

Photographers' Association of America

To the Photographers:

The educational feature of the National Convention that is to be held in Kansas City July twenty-first to twenty-sixth will be a practical studio in actual operation. Every department will be fully equipped with the latest and best apparatus and a continuous demonstration will be conducted by various competent workmen selected by the president.

The Ladies' Federation have been requested to select lady receptionists of national reputation who will give their best methods of handling patrons from their entrance into the studio until their departure.

All photographic conventions that have been held during the past years, or at least since the fraternal movement of helping each other was inaugurated, have striven to excel the previous one.

There is not the least doubt that the best and most approved way of educating is through practical demonstrations. Following this thought, our president is responsible for the novel idea of erecting a studio within the convention hall and having it in actual operation.

No one can for a moment question the great good, from an educational standpoint, that it will accomplish for those in need of help in any department. Every man or woman in the photographic profession should be identified, not only with his or her State association and attend the conventions held by it, but they should become a member of the National body and secure the great advantage that is to be gotten by a regular yearly attendance upon its conventions.

The Executive Board have gone to a great

expense and a great deal of trouble to make this the banner convention, and the vast amount of new information that will be imparted in a practical way, will more than repay any one for the time and expense incurred in making the trip to Kansas City.

They have honored me with the most pleasant duty in connection with this studio, which is receiving the visitors, and I wish to assure all that it will afford me a great pleasure to renew the many friendships and acquaintances formed at any previous conventions and also make new friends among those whom I have never before met. I will also be only too glad to render any assistance that is in my power.

Looking forward with anticipation of much pleasure and profit to the coming meeting at Kansas City, I am, fraternally yours, Daddy Lively.

Burke & James' New Department

Announcement is made that Burke & James have installed a modern and up-to-date finishing and enlarging department for the convenience of such dealers as have no facilities for doing developing, printing and enlarging for their patrons. The firm's general sales policy will be strictly adhered to in this new department, they doing finishing and enlarging for recognized photo-supply dealers only. The department is thoroughly systematized to insure the same rapid and accurate handling of all orders thereon that this firm gives its regular orders from dealers. Dealers who can profitably take advantage of these unusual facilities will do well to write the firm for prices and other details. Address, Burke & James, 240-246 East Ontario Street, Chicago, Illinois.

Some Very Fine Products

Our readers will find a small advertisement appearing for the first time in this issue, calling attention to the Wonder Developer and other products being put out by the Amateur Photographers' Supply Company, Commonwealth Building, Denver, Colorado. This is a developer that has had the highest kind of praise from some of the most experienced and critical workers and is therefore worthy of a careful trial. The firm is also marketing the well-known French Satin, Jr., blue print paper, that has always borne a reputation for being about the finest product of the kind. Other of their goods can be expected to maintain the same high

standard and should be investigated by all workers using such products. The firm is giving special attention to mail orders and our readers can write with every expectation of courteous and careful treatment.

That Special Offer

The large number of replies to the advertisement of the twenty-five cent samples, three of the dozen packages, offered by the Photo Products Company, 6100 La Salle Street, Chicago, Illinois, has encouraged them to continue this offer as well as the dollar one, despite the fact that it was intended to run but once. Our readers certainly appreciate a bargain, and as there are thousands who have not yet accepted the offer, we trust they will look up the advertisement and do so at once. If they could see the words of appreciation that have been injected into even our own letters from readers, they would feel quite sure of receiving remarkable value and an introduction to a very fine developing paper. Look up the advertisement, Some Special Offer, and act upon the suggestion.

Rodenstock Agency in Chicago

As our readers will surmise from the advertisement in this issue, the American agency for the G. Rodenstock lenses has been disposed of by Krepis & Stelling, of Augusta, Georgia, to the W. J. Lafbury Company, of Chicago. The former firm found that the fast growing business could not be handled properly by them, and as Mr. Lafbury had been in their employ for some time and they could vouch for his high character and honesty, they gladly turned the business over to the firm of which he was made president. As Mr. Lafbury has been engaged in the photographic supply business for many years, is well and favorably known to the photographic trade throughout the country as well as in Chicago, and as the firm has good financial backing, the continued success of the excellent line of Rodenstock lenses is assured in this country. Our readers should write for a catalogue of these lenses, addressing W. J. Lafbury Company, 305 North Fifth Avenue, Chicago, Illinois.

To Make Good Work

For those soft, well-illuminated flashlight negatives we recommend the use of the Actino Cartridges. The manufacturers of these have made the successful use of them very simple, by putting up the cartridges on a

basis of the amount of illumination furnished for given sizes of rooms. For example, their No. 12 will fully illuminate a twelve-foot room, their No. 18 fully illuminates an eighteen-foot room, etc. This method is certainly an improvement over the old custom of giving the number of grains of powder contained in the cartridges, without giving the user any information as to the actinic strength of the cartridge. Manufactured by James H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago.

A Handy Color Outfit

The most convenient, inexpensive and complete outfit for the coloring of prints and lantern slides is the Velox Water Color Outfit. The outfit includes a set of excellent camel's-hair brushes, artist's mixing palette and book of Velox Transparent Water Color Stamps, containing twelve colors and full instructions for their use. Prints and post cards are made very attractive by the addition of a bit of color, and we know of nothing so simple to use as the Velox colors for this purpose. No experience is necessary, though a little practice naturally makes one better able to secure greater harmony of color. The instructions suggest the colors which are best suited for most subjects, and it is almost impossible for one to make a failure if they are followed to the letter.

The complete outfit, in a neat box, sells for seventy-five cents. Your dealer has them in stock.

One Hundred Dollars in Cash Prizes

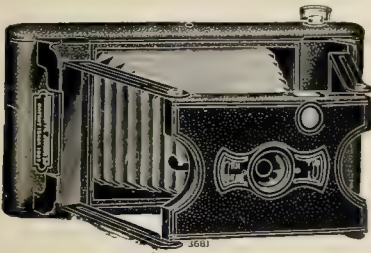
A prize contest is being conducted by the manufacturers of Hydra Plates in which the amateur and professional compete on an equal footing. While it is not a condition of the contest that any specific kind of plate be used, by using Hydra Plates the amateur can greatly overcome any advantage that superior knowledge of photography might give to the professional. It is claimed for Hydra Plates that they cannot be over-exposed—that when the shadows are exposed for, the high lights take care of themselves. As a result, Hydra Plates make possible the photographing of most unusual and beautiful scenic effects. For the second best photograph, a prize of twenty dollars is offered; for the third best, ten dollars; for each of the fourth, fifth, sixth and seventh best, five dollars. The contest is open to all. The manufacturers of Hydra Plates wish it under-

NOTES AND COMMENT

stood that it is not a condition of the contest that these plates be used. They simply recommend them because of the aid they will give.

The Ensignette Junior

For simplicity and efficiency, we can most highly recommend the Ensignette Junior cameras. This is a new addition to the Ensign line, which is one of the most complete lines of cameras on the market today, ranging in price from the simple box camera at two dollars and



fifty cents up to the high-grade Folding Ensign Reflex cameras. The Ensign Junior is very practical, making a picture $2\frac{1}{4} \times 3\frac{1}{4}$, which is large enough to reproduce as original prints, and, if desired, the proportions are correct for post card enlargements. Its general construction is similar to the Vest Pocket Ensignette, but more substantial. The bed of the camera is made of wood covered with leatherette and the back panel is of metal. The camera front is drawn out where it is held in position by struts and is ready for use in one motion. It utilizes the well-known Ensign Roll Film in rolls of seven exposures. The model is so simple and so compact that it will be very popular this coming season. If interested write for the Ensign Camera catalogue to G. Gennert, 24-26 East Thirteenth Street, New York; 320 South Wabash Avenue, Chicago, or 682 Mission Street, San Francisco.

"Fallowfield's Annual"

Fallowfield's Photographic Annual, now in its fifty-first year, has just reached our desk in the shape of a handsome cloth bound book of over seven hundred pages, a veritable encyclopedia of the photographic trade, containing, as it does, information concerning a most comprehensive list of the materials, chemicals, apparatus and other articles on the photographic market, irrespective of maker or price. This is the annual

edition, and is sent postpaid for one shilling and sixpence, or thirty-six cents, foreign stamps accepted from abroad. Address, Jonathan Fallowfield, 146 Charing Cross Road, London, W. C., England, mentioning this magazine.

The New Assur Process of Coloring

Since mentioning this new and practical process of coloring photographs in our March issue, we have had the pleasure of examining one of the complete sets in a neat metal box, just as supplied by the dealers. In addition, several fine examples of colored photographs have reached us from various sources, readers who have tried the new process and are loud in their praise of its ease and simplicity. Particularly satisfactory is the ease with which large surfaces can be covered with a uniform tint, this being a point that will be appreciated by all who have had experience in trying to use colors on photographs. Another valuable feature that the novice will appreciate is that of being able to wash out any unsatisfactory result and make a new trial with the same print. The colors are strong, brilliant, and they dry quickly. This, in addition to their transparent qualities, makes them most desirable. They are manufactured by the Chemische Fabrik auf Actien, vorm. E. Schering, of Berlin-Charlottenberg, Germany. Dealers are supplied in this country by Schering & Glatz, 150-152 Maiden Lane, New York. Write the latter firm for a new circular which they have just gotten out on these new Assur Colors.

The New Harris Price List

Just after we had gone to press with the June issue, we received a copy of the 1913-14 price list of Ralph Harris & Co., of Boston and New York. A new departure has been made this year by the inclusion of a fine print on Wellington Bromide, for which, with the other products of this famous English line, Messrs. Harris are sole United States agents. This eighty-page booklet is one of the most convenient reference handbooks, for it lists almost everything photographic, the firm being one of those to which Mr. Wall's suggested motto, "No, we don't carry it," most emphatically does not apply. The success of the Harris business has been largely founded on keeping a complete stock, and the inquirer will find in the pages of this catalogue goods which would be vainly

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sought for in more pretentious ones. Since the passage of the parcel post law, full information about rates has been incorporated into this new edition, hence the worker living far from stock houses can easily figure for himself the exact cost of the goods he wishes to order. No matter how many other catalogues you have, do not neglect to send at once for this one.

The New Ernemann Catalogue

Those of our readers who are interested in high grade cameras of German manufacture should send for this handsomely-illustrated list, covering one of the finest lines imported into this country. The book is handsomely printed, the cover embellished with a large reproduction of one of Duhrkoop's portrait studies, and among other interesting reproductions is a full page one of a picture taken from an airship. There is much to interest in the description of the cameras, and our readers will do well to write the American agents for a copy. It will be sent free to our readers. Address, Max Meyer, 18 West Twenty-seventh Street, New York.

New Goerz Catalogue

The Goerz catalogue is always welcomed with enthusiasm by the thousands of amateur and professional photographers who either use Goerz lenses or who look forward to the possession of a Goerz lens or camera as a hoped-for piece of photographic good fortune. The new edition is a substantial book of sixty-eight pages, printed in sepia with a gold and green cover, and it is one of the neatest examples of the catalogue maker's art that the season has brought to hand. The introduction includes about fifteen pages of general information, free from abstruse terms, and the rest of the book is devoted to the well-known Goerz anastigmats, hand cameras and binoculars. The number and importance of the recent additions to the Goerz line are especially striking. Among the lenses, we note the Portrait Hypar, the Process Artar, the Pantar, and the Hypergon without the star diaphragm. The Taro Tenax, the Coat Pocket Tenax and the Stereo Pocket Tenax appear for the first time in the section on cameras. The book is profusely illustrated with a great variety of samples of Goerz lens work, and some of the pictures are unusually attractive. You can secure the catalogue from your

dealer or, by writing to the C. P. Goerz American Optical Company, 321½ East Thirty-fourth Street, New York City.

More Polar Scenes

In the special "Scott" number of the London *Daily Mirror*, issued May twenty-first, and just to hand, there are some fresh pictures of the Far South taken during the earlier part of the British Antarctic expedition of 1910-12. Owing to the tragic fate of the commander and his companions upon their return journey, after having successfully reached their goal, these possess a peculiarly pathetic interest. They serve also to demonstrate how much was actually accomplished in that greatly daring enterprise.

H. G. Ponting, F. R. G. S., the official photographer to the expedition, secured a large number of negatives and cinematograph films. The question of the method of development to be adopted was naturally a momentous one. Having had previous extended experience as to its reliability, Mr. Ponting decided to use only the "Tabloid" "Rytol" Universal Developer, rather than run any risk with this unique and unreplaceable series. On returning from the Antarctic, Mr. Ponting reported concerning it as follows: "Of 'Rytol' I cannot speak too highly. I am convinced there is nothing better or more suitable for all explorers. Indeed, I never want anything else under any circumstances in future."

Notes From The Illinois College of Photography

V. A. Dominguez, of San Jose, Costa Rica, has enrolled for a complete course in photography.

Prof. J. H. Scott and Miss Blanche Skinner, instructors at the College, were married on the third of last month and left for an extended trip through the Western States. They will locate at Nome, Alaska, where Mr. Scott will conduct a studio for Lomen Brothers. The positions on the faculty vacated by Mr. and Mrs. Scott will be taken by Mr. and Mrs. Russel Latshaw, of St. Louis.

G. A. Colt, who has been employed in a studio at Yonkers, New York, the past few months, has returned to the College to finish his course.

The prizes at the June contest of the College Camera Club were won by Messrs. Broeker, Bolen and Holzmüller.



A WINDOW PORTRAIT
By F. MORRIS STEADMAN

CAMERA



CRAFT

A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

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The Business of Home Portraiture

By F. Morris Steadman



With Illustrations by the Author

EDITOR'S NOTE.—*In the concluding article of Mr. Steadman's recent series, he kindly volunteered to give in future articles, information concerning any point that our readers might wish explained more fully. The article below is in response to the most persistent of the questions put; and, we believe, gives these readers who inquired as to the business methods Mr. Steadman's own practice had shown as most advisable, information that is of the greatest value.*

In choosing a field for the practice of home portraiture as a business, one should carefully consider the all-important factors of supply and demand. If one really must stay at home, he should, if living in a city, endeavor to locate near suburbs in which there are no studios or certain adjoining towns having no photographer. By going into such places to find work, one stands a much better chance of success. If one drops down in Robinstown with a nice fat work, he will have no trouble in getting rid of it. People who are somewhat removed from a studio are generally in need of photographs.

Another method is to select a group or circle of towns, towns with no studios, in a good country, then locate in the most central or most conveniently situated of the group and work these towns in succession. Doing this last, working under such conditions, one should make it a point to get together a complete mailing list of the residents of each town as well as of the country around. This list should be used for the purpose of sending out announcements, mainly to advise the recipients of the approximate date of one's visit. I would not advise a studio, but simply a residence in the town where headquarters are located. One should strive to be known as a home photographer exclusively.

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PLEASING POSES ARE ALWAYS NATURAL AND EASY

On entering a town for the first time, I would get some children and a young lady or two to sit for some sample pictures, giving them the next day one picture from each negative used. It is not difficult to find out who the leading families are and which of these homes have pretty children, and I have seldom been refused the privilege of making pictures of them for my collection. But one should be sure he is able to do the work correctly before going after it. A few of these used as samples will get the work of others if shown by one who looks right to the people, and that is if one be neat and courteous. This will be enough for one day, and on the next, armed with about six photographs of residents of the town, the photographer should canvass from house to house. Without showing haste, one should have these sample photographs in view when the door opens. If a servant comes to the door, I would not ask to see any particular person, but ask to have the pictures shown to the lady of the house. The name is a help if it can be managed and often one can secure the names of the families in the next three or four houses by apparently consulting a note book and asking if Mrs. So and So lives near, as one closes the conversation at any particular house. The main point is to have the sample portraits of children

THE BUSINESS OF HOME PORTRAITURE.

and their parents such that they will be recognized at a glance by the people to whom they are shown. One should explain that these are photographs of Mrs. So and So's children that were taken yesterday and that he would be in the town for a few days doing that class of work at the homes, of course varying the wording occasionally. Do not, under any condition, ask any one to have work done, but simply ask if they need photographs at that time. Do not use up the time of the people on whom you call if you have all the arts of a trained salesman at your command. Try to act the part of a good photographer, interested in your work and anxious to guarantee it should your services be required. Always leave the impression of being busy and in a hurry to get to the next town. If the party you are calling upon is undecided, leave the house before you get a refusal. Then drop in the next day with new pictures of people they know and advise that you think you will be able to get through with your work in their town in about three days, or whatever time you honestly think will be sufficient at that time. If they need work at all, they will come to the point quickly; and working in a series of towns it is very important that the people learn that you stay but a short time and that you do not worry them with solicitations. Let them know this and that you do good work and finish it promptly, and your work is made much easier. One person should solicit, take the negatives, develop, show proofs and take orders as well as deliver and collect. The other should do the retouching and finishing. Two can do three times the work one can do, yet three are simply impossible. Logically, the work, aside from the finishing, must be concentrated in the hands of the man who comes in contact with the public. Particulars as to doing the developing, printing, etc., come later, as some have asked for this information. At this time I wish to cover the subject of the field work somewhat more fully.

I have written the above for those who are compelled to stay at or near home while doing their work. To the young man who is free to roam, I would say that there are fields that need your work. You must first fully appreciate



GIRL WITH THE ROSE

CAMERA CRAFT.

the fact that the field of home photography is practically untilled. Put your finger at random on a map of the world and you will hit a place where the business is undeveloped. Here in the United States there is some little home portraiture done, as we have the benefit of conventions and, what is of still greater importance in the elevation of the work of the photographer, manufacturers of photographic goods with their universal advertising. In addition there are the photographic magazines and the general intermingling of men and work characteristic of our country. But Mexico, Central America, and the whole continent to the south, a country which we are nearing soon with the great canal, and consider its vastness, the scarcity of railways and the long distances that photographers must travel in order to learn what is going on elsewhere in his line of work.

All through these countries, not excepting the cheaper studios in the larger cities, they are still making card photographs, the size that go in the small openings in the old family album, together with the "Paris Panels" on a chocolate card that were so very stylish in the Garden of Eden, and all through these countries there are wealthy families, families who take their occasional trips abroad, and therefore know the value of really good photography. This condition, combined with that created by the lack of advancement among their local photographers, makes a field for home photography that is indeed tempting. Going after and doing this work is particularly interesting and profitable for



A GARDEN PORTRAIT
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HIS FIRST PICTURE

THE BUSINESS OF HOME PORTRAITURE.

young men. Another advantage attending working in the Latin countries lies in the kindly attitude of the people toward one who is doing some kind of work and soliciting orders. There no gentleman will interrupt another while he is occupied. If one who canvasses among the people will observe the ordinary rules of courtesy, he will be received in these countries pleasantly and his work examined critically, while the orders will come with a speed and freeness that is surprising; that is, should the work be really deserving.

But before any such trip is undertaken, the photographer must be absolutely certain of himself, sure as to his ability to make good pictures under home conditions. In these countries, most home photographs are taken in corridors and interior courts or "patios" or by the side of vine-covered walls, on stone steps, and like situations; yet to make beautiful photographs inside of the house is also necessary.

It is certainly every man's duty to have enough money laid by to carry him over unexpected troubles, such as accident, sickness, etc. It is plain that in taking a voyage such as I have mentioned to a foreign country, it is doubly necessary to be equipped with enough money to cover all possible expenses during any crisis which might arise. A slight knowledge of Spanish is also essential in these countries, but if the language be spoken none too well, it proves your newness in the country and that is really an advantage.



A SIMPLE HOME PORTRAIT

It is absolutely essential that roll film be used for the work. By making arrangements with your stock house before starting, all supplies can be sent on to you regularly by parcel post. But in our own country many places may be found where there are families far distant from any studio. Another promising field is the frontier. I have often thought that it would be fine to take up some land in a new Western farming territory, let the "hired man" do the

CAMERA CRAFT.



IN WALKING GARB



AT THE WINDOW

farming while I attended to the photographic needs of the growing community. These people always want pictures to send "back home." The main point is to avoid "butting in" on an oversupplied community, but to go where people need your work and will accord you a welcome.

The man who has daily inured himself to the habits of concentrated attention, energetic volition and self-denial in unnecessary things, will stand like a tower when everything else rocks around him, and when his softer fellow-mortals are winnowed like chaff in the blast.—WILLIAM JAMES.



This, That and the Other

By Geo. H. Webb



With Illustrations by the Author



THE AUTHOR

I will first tell you a little story. At a meeting of mechanical engineers held recently in one of our Eastern cities, a young engineer said to an older one: "James Watt, the first steam engine builder, must have been a great engineer." The old engineer answered, saying: "I do not know, I have never seen his scrap heap." What we can learn from that story is this: The greater an engineer (or member of any other profession) is, the smaller his scrap heap.

Mr. Clute, did you ever look at a picture, and then look at it again and again, finding something about it that made looking at it a pleasure? A picture like that is one that I would call a work of art. Now I do not want Mr. Sleeth, of Portland, to ask me what art is, because I do not know. Poor Mr. Sleeth! I wonder if he ever got over that spasm!

I'll bet you could have bought his outfit cheap about that time. But to return to that picture; I have such a one, a common colored print, entitled "An Old Homestead." For years it has been my ideal, and for years I have worked, and failed, to get something as good. I have shown some of my friends one of my prints, and been told that it was fine, that it could not be beat; but I only have to hold it up alongside the old print—then lay it aside. Yet from early childhood it has been nothing but pictures for me. My father, as long as I can remember, was a professional photographer, one of the first in Eastern Ohio. A brother has taken his place, and I have two other brothers who are amateurs. So you see there is professional blood in my veins.

To go back to that story. In an article in *CAMERA CRAFT* some time ago it was shown conclusively that one must specialize in order to gain success. Now how is one to know when he is successful? Some say that I have been successful, but I do not think so. I have dabbled in about all the different things an amateur can dabble in. I find that I enjoy, not so much the finished



THE FIRST FLOWERS OF THE SPRING

product as the making of it. The planning of a trip, the trip itself, and even the return home is good; but I enjoy most the developing of the negative. I would not give one cent for a tank for my own use, and I have several of them. To me the pleasure lies in seeing the image come out—especially when the time happens to be about right. I will say right here that I do not always get good ones, failures being frequent; hence my scrap heap, you ought to see it, at least what I now have on hand!

It would gladden the heart of any plate maker to see that heap, to learn whereby a good many United States coins have been transferred from my pocket to his. Yet one can learn a good deal from a scrap heap by looking it over. If I had only shaded the lens on this one, given more time on that, or not so much time on another, and so on through the pile. Experience is a dear teacher, but what can an amateur do but accept her tuition. Talk about just touching the button and we will do the rest! That looks nice on paper! But if you had developed as many plates and films as I have for button pushers, you would change your mind about it.

In making this scrap heap of mine, I have used a Conley long-focus camera fitted with series 2, f-5.4 Collinear lens in a Koilos shutter, which as a combination is good enough for me. As for material, I have tried about all kinds. Just now I am using Cramer's Crown and Isonon plates because I can get them at a reasonable price in my home town. In papers, that part of my scrap heap suggests the use of a great variety of post cards, ranging from hard to very soft and from glossy to dead matt. I use Azo, Cyko and Artura for the same reason that is given for the plates. And would you believe it? I have by experience reached that point where I can most always tell what par-

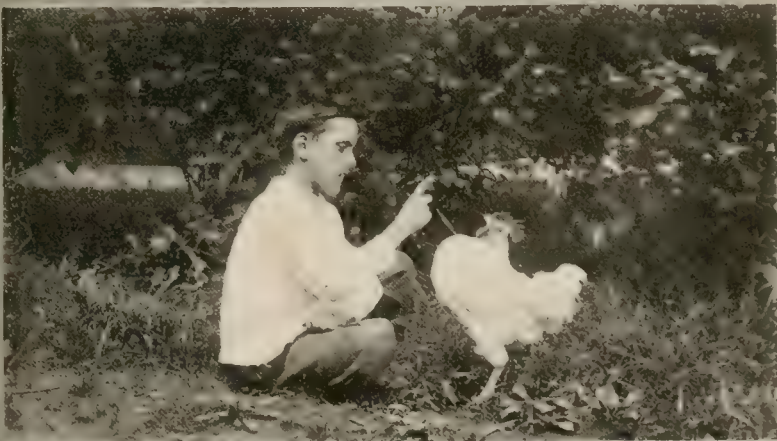
THIS, THAT, AND THE OTHER.



LOOKS LIKE FLORIDA, BUT IT'S OHIO

ticular kind of card to use for any given one of my varied negatives. It is a matter of long practice.

I became a member of the International Photographic Association about two years ago and have enjoyed some very interesting correspondence. I have in all about eight hundred post cards that I have arranged in albums holding



THE YOUNG HYPNOTIST AND HIS SUBJECT

one hundred each. About two hundred of the bunch are "bum," too poor to use. These were some of the first received; they were accepted before I learned how to find good ones. I do not enjoy sending back any prints that are sent to me, but I just tell them my reason for not wishing to exchange further. I have a few exchanges that have kept on writing letters even after we had exchanged all the cards we had, and I enjoy it. There is but one bad feature about this exchange of prints, there were a good many of my correspondents who stopped sending while they still owed me cards. Some few, I am afraid, do so just to get cards for nothing, while others are simply careless in keeping their records.

Talk about a man knowing things! I have a friend that, besides a lot of other things, knows birds. I always like to make trips with him, although he is some walker, being six feet three inches tall, and strong as the traditional ox. While these trips make me dog-tired, still I enjoy them, for the reason that I always learn a good deal. One day, after I had made up my mind I wanted some bird-nest pictures, he said to me: "Say, George, do you want a catbird's nest? Well, you go to that large signboard in Fisher's field, get at the middle of it, walk one hundred feet south to a blackberry bush, and there you will find one." So, after working hours, I got my old 5x7 and went according to directions, but no nest could I find. After a half hour's hunt I gave it up. The next noon he went with me; and, just at the place he had directed me was as nice a nest as one ever saw, and in plain sight, too. On another hunting trip I repeatedly called his attention to birds flying up, only to be told that they were just feeding and that there was no nest near. But at one place a bird came out of a bush as if shot from a gun. Then he said: "Here is a nest." And sure enough there was one. After making an exposure I made a mental note something like this: "Lesson One. When you flush a bird there is a nest there." Several days afterward I made a trip myself after bird's nests, alone. I located a lot of bobolinks, hunted a long time, flushed a number of them, but did not find a single nest. Telling him my story upon my return, he said: "Don't you know that a bobolink slips through the tall grass for a long distance before it will fly up?" Lesson two. All birds are not of the same habits.

Decorative Art

It is characteristic of decorative art that it depends almost as much upon the critical as upon the creative faculty of the artist. More than any other art it depends upon test; and by that test it stands or falls. It is taste that determines—what is it that it does not determine in decoration? It settles in the first place whether there should be decoration at all, how much of it, of what kind, where it shall be introduced, and how executed. It prescribes what is wanted, what is admissible, and what is becoming. Not one of these questions can be solved without reference to it. Every work of applied art is a problem, and the most important factor in its solution is taste.—LEWIS FOREMAN DAY.

Surf Photography

By H. Oliver Bodine

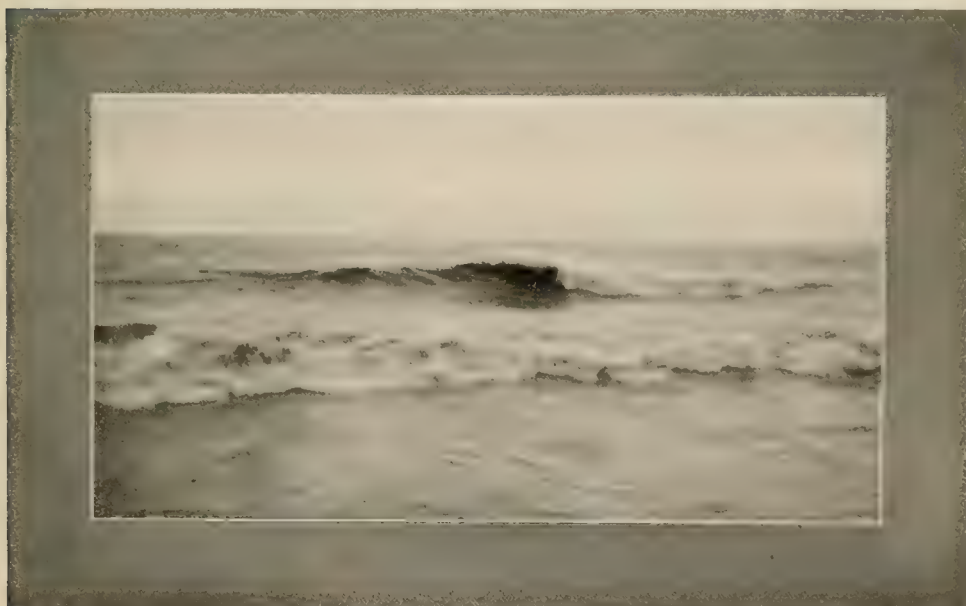


With Illustrations by the Author

An interesting branch of photography, one which has not received as much attention as it deserves, is that of making wave or surf pictures. Of course, many of us are so situated that we have no opportunity for such work except as we travel some distance, but anyone living near one of the many large lakes in this country or along the sea coast will find ample opportunities for this interesting line of work.

What kind of an outfit is required? This is naturally the first question that is asked. It may surprise many to learn that even the little two or three dollar box cameras will accomplish wonderful results if used understandingly and the conditions are favorable. Of course, the best outfit is a reflecting type camera equipped with a high-speed anastigmat lens, one of as long a focal length as the camera will permit to be used. Yet some of the most interesting wave studies that I have had the pleasure of seeing were made with inexpensive pocket cameras, or those of the box type; but of course it is not always possible to obtain the best results unless light conditions and the speed of the breakers are favorable.

Some of my own best results were obtained with a reflecting type camera,





using 5x7 plates, some made with the back combination of a seven-inch anastigmat lens working at $f6.3$, and others were made with one of the soft focus lenses. The first has a focal length of approximately fourteen inches and a working aperture of about $f12.5$. The latter happened to be a little shorter in focal length, but of about the same speed. The developer was the ordinary metol-hydroquinine, with the exception that a minimum amount of carbonate of soda was used in order to make a solution that allowed the negatives to build up slowly, thereby giving what might be termed a thin negative, but one which is a rapid printer free from harsh contrast.

I wasted a goodly number of plates before I finally discovered the secret of making successful wave pictures and I believe that many who have attempted this work and failed to succeed would be surprised to learn that my trouble was caused by using the camera too far above the ground. Wave pictures, to be interesting and to carry conviction, should show magnitude and force, for therein lies their principal interest, and to secure this the wave must be one whose crest is above the horizon or sky line. To obtain this effect, with the ordinary size wave, it is necessary to work low to the ground, pointing the camera slightly upward. This will make the wave that would appear as only an ordinary white cap if taken in the usual way, appear rather as a huge monster full of life and energy. The few pictures reproduced herewith were all taken in this way, using a focal plane shutter and an exposure of one one hundred and fiftieth second, lens and aperture as noted above. Pictures of breaking spray are very desirable and the slight blurring caused by the rapid motion of the dashing water adds to the affect to a greater extent than is generally appreciated. The ideal day is one in which the horizon is broken up by strong clouds. If one can find a stretch of beach where good-sized rocks are in evidence, he should have no difficulty in obtain-

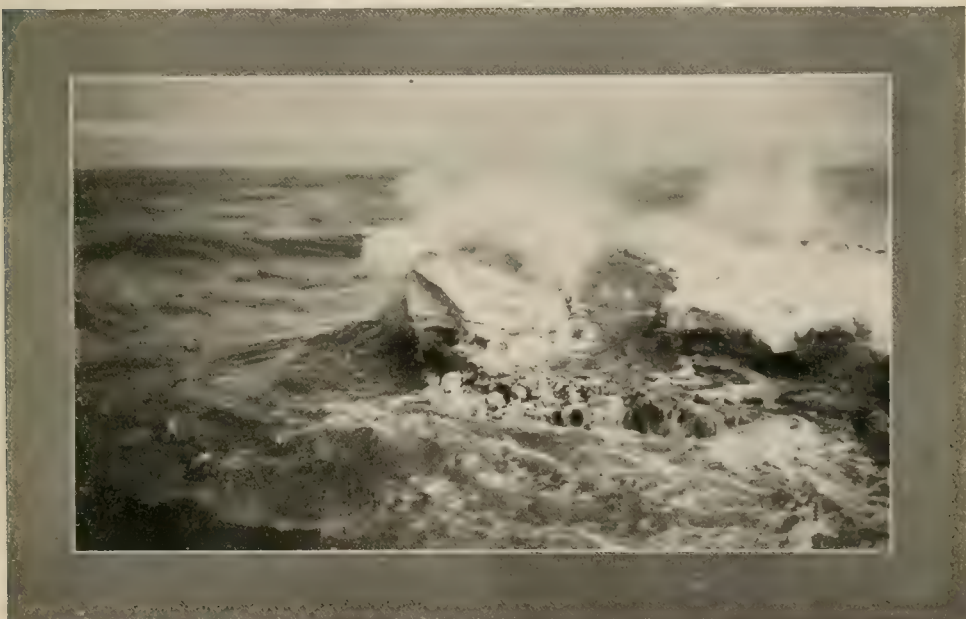
SURF PHOTOGRAPHY.

ing a series of wave negatives that possess just that desired touch of character and life that seems so necessary and essential in pictures of this kind.

As enumerated above, the points to be remembered are: The lens should be of as long a focal length as can be used in order to get as much magnification as possible; metol-quinole or any other good developer should be used with a minimum amount of carbonate of soda; the plates should be double coated, or, better still, double coated and backed, these last giving about the same results as the standard roll films; and the camera should be set on the ground, or low to the ground, and pointed slightly upwards. These essentials are necessary, it being understood, of course, that a body of water must, at the same time, be at hand and the waves in motion.

In going after wave pictures it would be well to prepare for a drenching, as one may find it necessary to work where he is apt to be favored with the spray of the breaking waves in striving to get the best possible position. After the negatives have been made and any working up that may be necessary is done, make or have made, enlargements from them of a size not smaller than 8x10; and, if possible, tone them either green or blue. The comparison between the enlargement and a contact print made from the same negative will demonstrate the fact that pictures of this kind do not carry the weight and conviction in the small sizes that they do in the larger ones, and comparing a blue or green toned print with a black or sepia one will clearly show the advantage of the more suitable tones.

Of all God's gifts to the sight of man, color is the holiest, the most divine, the most solemn.—RUSKIN.



Luxembourg, A Photographic Paradise

By Sigismund Blumann



With Illustrations from Negatives by Jacques Tillmany

EDITOR'S NOTE:—Our reproductions of Dr. Eisen's beautiful pictures of Nile scenes, used to illustrate his article in a recent issue, brought us a flood of inquiries as to where and how originals might be obtained. For the benefit of those who may wish copies of the pictures reproduced herewith it might be well to state that Mr. Tillmany's negatives, several hundreds in all, have been placed in charge of Sigismund Blumann, 3217 Davis Street, Fruitvale, California, who will supply prints at a nominal price.

Of late, comic opera and romance have done much to make the independent duchy of Luxembourg well known to peoples of distant nations. All the free art of the scene painter and all the imagination of the story writer cannot add to the real interest and picturesqueness of this little two-by-three freehold. Anyone equipped with a camera and a fair knowledge of exposure needs only to aim in any direction and squeeze the bulb to get something worth while, both as an historic and an artistic production. Composition has been cared for, centuries back, by Barons and serfs. Every tessellated castle, every narrow way, every bridge and moat, has been placed as if under the direction of a consummate artist. So well does the time softened work of man harmonize with the natural formations and river contours that the whole seems to have grown, bit by bit, in general conformation. The hand of time has not been ruthless, but rather, has crumbled crude outlines, covering the marks of human labor with a beauty giving a result that might tax the brush of a Corot or Turner. The photographer finds subjects well worth his plate or film in every



MILK DELIVERY—UNIVERSAL THROUGHOUT BELGIUM

LUXEMBOURG, A PHOTOGRAPHIC PARADISE.



MAIN GATE TO OLD CITADEL



WATCHTOWER, ANCIENT CASTLE



ALONG THE OLD CITY MOAT

direction. Even the clouds are generally cumulous or stratified throughout most of the year.

Passing through the city one sees quaint, tall buildings, reminiscent of old Dutch Amsterdam. Wonderful outlines, overhanging windows, clean swept paving stones on the streets, and great slate flags or elaborately designed bricks on the sidewalks. Here a milk cart drawn by a docile dog, there a huckster with his wares hung on lines like the portable emporium that it is. Occasionally a peddler, with such a load as might tax a horse's strength, goes singing along the way. These men contrive to live, save, hope and be happy on an income of about forty American cents a day. The costumes of the common class are as picturesque as the scenery; full baggy pantaloons and smock frocks for the men, voluminous skirts, snowy waists and velvet corslets laced front and back, all topped by a starched cap, for the women.

There is one square where cafes abound, cafes named after every country on the face of the globe, so named to induce the patronage of the tourist. In the Cafe Anglaise and the Cafe Americaine you will find that: "Here is Inglis gesproken." You may not recognize your mother tongue, but the intention is good. At the American Cafe you can obtain a "Kuktail." The proprietor does not entrust the concocting of this mysterious foreign drink to



A CITY WATERWAY
366

WASHING CLOTHES

LUXEMBOURG, A PHOTOGRAPHIC PARADISE.



OLD CITY GATE

A PUBLIC LAUNDRY



MOAT AND KEEP—OLD LUXEMBOURG

the fat barmaid, nor to noisy, bustling Henri; he feels called upon to serve as well as mix the "Kuktail," and the result is indeed a weird drink. Every liquor and syrup in the place enters into its composition, and two of them should set the best seasoned tippler on his ear.

The city's great highway is a magnificent thoroughfare that leads past palaces and royal parks. Utilitarianism is everywhere disguised by art. The railway bridges are things of beauty, the fences an addition to the landscape. At the point where town and country meet, the river bends and flows smoothly over shallow sands; and here, on fair days, the thrifty house-wives gather to wash the family clothes. The method is primitive but very effective. The articles are soaked, soaped, pounded with a sort of club till every vestige of soap and dirt has formed an emulsion; then rinsed, wrung out, and the linen of which the poorest household has what to us should seem a wealth, is spread on the grass to bleach. At these foregatherings the talk runs free and gossip is so comprehensive and far reaching that one wonders what can be left for the newspapers.

Mr. Tillmany, whose pictures of Luxembourg are worthy of a master's brush, modestly insists that the camera, not he, deserves all credit for the results. Over a dozen films were exposed each time he went out, each one resulting in a picture well worth a print except as an occasional one was spoiled through error in exposure or failing to wind the key. He found his greatest difficulty in keeping the expenditure for films down to a reasonable figure, the subjects being so plentiful and inviting. To say that one can take pictures two hundred days in a year, and take several dozens a day, working within a radius of a few miles, will perhaps give some adequate idea of the possibilities of this photographic gold-mine, beautiful Luxembourg.

A Word of Caution

Just too late for attention in our June issue, we received a communication from H. W. Hales, a gentleman who has had considerable experience acetylene and who is the manufacturer of the Hales' Acetylene Table Lamp, advising that the use of a glass jar as a generator of the gas, as described by one of our contributors in our April issue, is not to be commended. He says that the heat generated by the carbide is apt to crack the glass; and, if such did occur, an explosion would follow. There is a constant danger of one getting hold of a glass jar that would not stand the strain, making the use of such a generator a risk at all times. Mr. Hales says that the generator should by all means be made of metal and that all escape of gas should be avoided when lighting the jet. Pure acetylene will burn, but when mixed with air it becomes a violent explosive.

The mission of art, music and poetry is to express and reveal, with a beauty beyond our own attainment, what we feel, what we love and what we hope for. Many, or most, of us are capable of great feeling, but to few has been given the power of great expression.

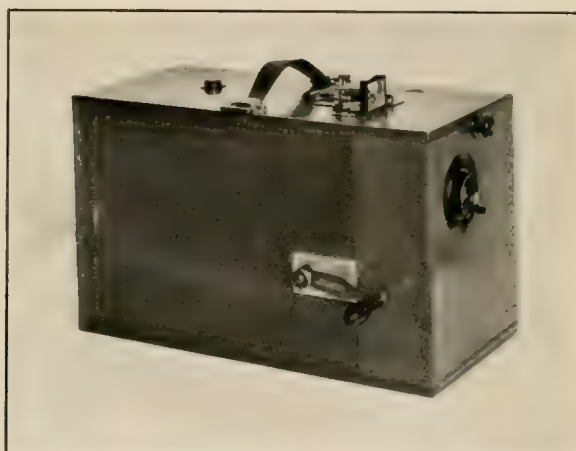
Amateur Animated Photography



Photographic progress from the days of the wet plate process to our present concise, inexpensive and labor-saving modes of perpetuating and recording scenes, passing events and the million and one other interesting vocations of photography, may seem to have kept its own if not even exceeding progress along other lines. And yet, had some one as short a time back as five years suggested that at this date any amateur, no matter how little versed he might be in photography, would be able to record and perpetuate motion, it is hard to conceive what opinion or expression of doubt would have been forthcoming in reply. However, such is now

an accomplished fact; a camera has been provided for universal use which will simply, accurately and inexpensively expose what is commonly known as standard motion-picture film and permit the user to perpetuate in actual animation any and all happenings of present-day life.

Unfortunately the accompanying illustration of the motion-picture camera that will do almost everything photographic, does not convey



THE NEW MOVING PICTURE CAMERA

any satisfactory impression of its wonderful mechanism; yet, when it is considered that this camera, with a capacity of from three to four hundred feet of standard film is no larger in bulk than a present-day Graflex camera, and that when fully loaded it weighs but a little over twelve pounds, a better idea may be had as to the wonderful progress that has been made in "goods photographic."

One may argue that the motion-picture camera is nothing so radically new, and truly, in one sense it is not, for as far back as fifteen years, even longer, motion-picture cameras of various patterns and construction have been most strenuously employed in the production of photo plays, today the most wonderful source of entertainment and education throughout the land. But how few ever realized or would scarce believe that by means of the proper and simplified form of motion-picture camera any one so inclined would soon have the privilege of taking and reproducing these animated pictures at will. How exceedingly few ever had the rare opportunity of even a peep into the box of mystery in the hands of the professional operator whose livelihood depends on the turn-

ing of the crank while reproducing on the negative film the magic pictures for which we are now so accustomed to paying our nickels and dimes to see reeled off on a curtain before our eyes? Very few, I dare say; because every professional motion picture camera man regarded the keeping strictly secret of the supposed mysteries his principal stock in trade. In most cases he does this with probably good ground for so jealously guarding that which had cost him perhaps years of tedious labor and large outlay of hard-earned funds to create.

Only a few years back, twelve to fifteen hundred dollars was not considered any too much to pay for a motion-picture camera, irrespective of its bulk or efficiency, and at that they were very scarce and difficult to obtain at any price. Even at the present writing, the seven to eight hundred dollars which is asked for the one or two foreign motion-picture cameras of quality is cheerfully paid without protest. To repeat, progress alone is responsible for the condition now obtaining whereby a high-grade, efficient motion-picture camera of such light bulk and large capacity as previously mentioned, may be had for less than two hundred dollars.

In order to better comprehend the intrinsic and sentimental value of animated photographic reproduction, the writer will merely venture one or two illustrations, and these will afford a better understanding and appreciation of the immense value of the facilities now available.

Suppose one obtains one of these new motion-picture cameras, to be had from a very prominent New York manufacturing concern in this line, and reeled up fifty or one hundred feet of film of his baby playing on the lawn in the full innocence of that childhood which maintains for only a short time in the lifetime of every human being; then, after securing such a record, one can enjoy its reproductions to the point where it is decided to lay the reel away for the time being. Some ten or twelve years hence some dear relatives from some distant point, relatives who had never seen the now grown boy or girl attending school, how much one would appreciate the opportunity of taking that particular film from his collection and reproducing the exact and lifelike actions and antics of the child. What amount in dollars and cents would one take for such a film after he himself had made it?

Take, for another example, a boating or hunting party, in fact, any social or recreative gathering, and reel up the interesting phases of the trip or proceedings. In what glorious appreciation would each and every member of such a party esteem the possession of a copy of such a film! A wedding happily transpires and is photographically perpetuated for posterity. A ball game is recorded and reproduced indefinitely. An auto trip, railroad journey, ocean voyage, summer or winter vacation, all may be truly and graphically enjoyed, over and over again, by the, now, simple means of amateur animated photography, an advance which makes possible the photographic perpetuation of the activities transpiring today.

One of the first truths of art has needed to be rediscovered in these times, though it has been put into practice by every great artist, . . . that art must never be a statement, always an evocation.—ARTHUR SYMONS.

The Camera on a Trip

By S. B. Risdon



With Illustrations by the Author



ON PICK'S TRAIL

Trips with my camera and a good supply of loaded plate holders are recreations that I enjoy to the limit; much more, even, than using the gun or fishing rod. To go on these trips and to bring home pictures of the charming views and picturesque spots along the many small streams encountered, is most delightful. Camping trips are particularly enjoyable, and the pictures shown herewith were taken in the mountains of Monterey County while on such an outing. It is not always that I use the 5x7 long focus with which they were made, as I sometimes prefer to carry a little $3\frac{1}{4} \times 4\frac{1}{4}$ fixed-focus box camera. Some of the pictures taken with the smaller camera are among my very best, and many of these smaller negatives I enlarge to various sizes.

As to the matter of exposing, I seldom make snap-shots unless there is motion that cannot be avoided. I like to use a fairly small stop with either camera and make a time ex-

posure regulated by the light and the size of stop used. Snap-shotting a view without a tripod never appealed to me, as I never could get it all in the finished print.

It seems, in taking a picture like "The Headwaters," one which was enclosed and very shady, that the conditions are much the same as when photographing the interior of a house, easier to under than to over-expose. Giving what one would judge full time, and then some, then developing with a diluted developer, brings up a negative less dense and gives a better print. I sometimes carry Eastman's Hydro-Metol developing powders with me, dissolve them in eight ounces of water instead of four, for plates that I know to be fully



THE COMBER

exposed. One second exposure does not spoil the appearance of wind-agitated waters further than to cause a slight blur in the immediate foreground; and even when a longer time is necessary, a slowly running stream of water is sometimes rendered as the whole thing in a pretty picture.



WHERE FISHING IS GOOD

THE CAMERA ON A TRIP.



ON THE RIO SACHO



THE CROSSING IN THE VALLEY

On one occasion while traveling by wagon, my tripod was lost by falling unobserved on the road. In its place I used a sharp-pointed stick, about four feet in length, with two short cross pieces nailed level on the top; and, using a small ax I carried in my belt, simply settled the stick into the ground at the desired point after choosing my view. Placing my camera on this improvised support, exposures of any length could be made.

All of the pictures herewith were taken on clear days in November. "On the Rio Sacho," with stop U. S. 32 and one second exposure, while "The Headwaters of the Little Sur River" was exposed ten seconds with the same stop. The latter was located deep down between two high mountains where the sunlight never penetrated.



HEAD WATERS OF THE LITTLE SUR

Both were taken about ten a. m. "The Crossing" was given one second, stop U. S. 16 being used. As it was much more open here, the light was better and a shorter exposure sufficed. "Where Fishing Is Good" is another view on the Rio Sacho. The exposure here was one-half second, stop U. S. 16, at twelve o'clock m. "The Comber," one-twenty-fifth second, stop U. S. 8. "Near Idlewild" was exposed five seconds, stop U. S. 32, being on the shady side of the mountain, and "On Pick's Trail" the same. The lens used in all cases being an ordinary rapid rectilinear.

This Pick's Trail leads from the stage road near the ocean, back over the high mountains to an isolated cabin, once the abode of an old hunter, after whom the trail was named. The cabin is situated near a beautiful spring of water that bubbles out of the solid rock, cold and clear. This secluded spot was reached only after abandoning our wagon and using our horses as pack animals. Having procured a guide, we easily reached our destination in about five hours, and there we enjoyed ten days of revelry in picture taking and hunting.

Be at war with your vices, at peace with your neighbors, and let every new year find you a better man.—FRANKLIN.

An Inexpensive Form of Binding

By George E. Whiting



To give CAMERA CRAFT or any other like magazine a good, substantial binding, and yet one that is inexpensive, requires only a minimum amount of skill and ingenuity if gone about in the right way. In the method I shall describe, the original covers of the January and July issues are used to form covers for the two volumes into which I divide each year. These are, of course, not as stiff and bulky as would be regular binders' board covers, but they make a very handy volume, and one that gives perfect satisfaction as to wearing quality, despite the fact that I am constantly consulting them for photographic information.

The first requisite is a clamp made of two pieces of pine wood, 1x2x12 inches, surfaced on one side. A quarter-inch hole is drilled about three-quarters of an inch from each end of these two pieces, and two quarter-inch bolts, about three inches long, preferably with winged nuts, are used to connect the two as shown in the drawing herewith.



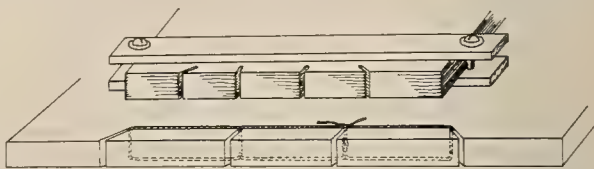
Take the magazines to be bound and remove all the covers, retaining the January and July ones. With a screwdriver or a pair of pliers pull out the small wire staples that hold each number together, and then remove the advertising pages. Occasionally there will be found an odd leaf of reading matter that will be loose when the advertising pages are removed. Such leaves, together with the frontispiece, should have a narrow edging of glue applied to their inner side and be attached to the signature just preceding or following. This is not necessary, but it is a precaution against their falling out or becoming misplaced while binding, or becoming loose afterwards. The bits of dried paste or glue along the backs of these bunches of pages or "signatures," as the printers call them, should be rubbed off with the fingers or scraped off with some blunt instrument like a dull knife, the latter being more suitable, as they must be perfectly clean.

Next jog together the signatures making up one six months' volume, get-

CAMERA CRAFT.

ting them even at the top and back. Place these between the clamps, taking care that they are square and true before tightening up the screws that prevent their slipping about. The clamp should be so adjusted that it leaves one-half inch of the backs of the signatures exposed to view. Then take any ordinary saw that is at hand and make four cuts through the backs, sawing in almost to the edge of the clamp. The two end saw cuts should slant toward the center, the two middle ones being straight. Use some care here, as these cuts are quite important if good results are wanted. With a small brush apply paste or glue to the exposed portion of the back, working it well into the saw cuts.

The sewing is done with good, strong, white string that has been given a coating of wax from an old candle stub or something of the kind. Starting in one of



the two center saw cuts, pass the long end of the string around and through the nearest end cut, back into the first cut, and there tie a knot to come in the center of the cut, at the same time drawing the string as tight as possible. The illustration herewith shows quite clearly the path of the string to where it comes back and is tied with a knot on the outer edge of the cut from which it started. Again apply a coating of paste and glue, working it into the saw cuts as before, and let stand while the cover is being made ready. This last simply means removing any bits of glue that might have adhered when the cover was taken off; and, pasting down the center a strip of tough wrapping paper, about one and three-quarters of an inch wide. This should be allowed to dry about ten minutes. If it gets too dry, it becomes stiff and does not make as nice appearing binding.

When the glue or paste is well dry on the back and in the saw cuts, take off the clamp, apply paste to the strip of wrapping paper down the inside of the cover, place the volume in the exact center of the latter and bring them up over, rubbing well into contact along the back and the sides of the back with the hands. When dry, the cover will draw up tight. All that remains to be done is to take the volumes to a printer and get him to trim off just enough to make the edges straight and uniform, and no more. If the "signatures" were all jogged up square at the top and back, and kept so by the clamp, this will mean but very little to trim away. Too much trimming means narrow margins to the pages and an unsatisfactory appearance to the volume when open for reading. The printer will charge but a few cents for this trimming, particularly if there are a number of the same size.

The result is a volume that is strong and serviceable, one lacking any superfluous weight or bulk, and one that has cost but a few cents and a little spare time. The illustration herewith shows the arrangement of the clamp, the tightening nuts being on the under side of the lower piece. The clamp, of course, can be retained and used for future work of the same kind. The path followed by the cord is also shown, as is the angle of the two end saw cuts that help the cord to draw all together as it is pulled tight before each tying. These saw

FIRST PRINCIPLES.

cuts are drawn somewhat larger than they really are in order to show them more clearly, no effort being made to make the drawing to scale. A picture of several of the volumes is reproduced herewith to give the reader an idea of their neat appearance.



First Principles

By Sigismund Blumann



John Sebastian Bach once said of organ playing that it was only a matter of details and summed it up like this: To put the proper finger in the proper manner with correct force on the right notes at the right time. This is a fundamental principle that applies to all accomplishments. Applied to photography, for instance, the writer is bold enough to say that Fayette J. Clute's "A B C of Photography" might be put, in its simplest form, on one page. Here is the thing in a nutshell:

As to the equipment, let us begin with the camera. Get the best obtainable camera that fits the especial purpose to which you intend to put it. Do not buy a 10x12 portrait box and a Centennial stand to go afield. Don't, by the same token, open a portrait gallery with a Kodak and a telescopic tripod.

Lens: There are many hundreds of lenses, all good. You are the maker of the picture. Just look through the lens by way of the ground glass and don't expect it to furnish the art. Choose your glass carefully by getting the one costing nearest to the amount of money you have to spend; then boast of that particular lens while you use the one that came with the camera.

Tripod: Be sure to get one that stands up under use and that has no bad habits. One that has acquired the vice of tripping its owner or throwing the camera in the mud, is worthless. Telescopic tripods are fine for Ica and other vest pocket cameras.

Focusing Cloth: Bright colors are never fashionable for an entire season. Plain black, moderately light-tight, is always staple.

Plates: Seed, Cramer, Standard, Imperial, Lumiere, Central, Stanley, Hammer, Vulcan, Wratten, and some others are the best plates. The photographic magazines are all reliable since Nehring's advertising appropriation ceased, and may be relied upon for advice, even in the matter of lenses. Only use your own judgment.

Papers: The writer has still to find a worthless paper that left the factory in the present generation. In buying developing papers, do not rely upon the freshness of the clerk; look for an expiration date on the package. Paper several years old is fine for fixing out and resensitizing with Kallitype or blue print solution, but plain paper is cheaper.

Developers: The man who invented a coat that should fit any man without alteration had paresis. His idea was all right, but he went wrong trying to

CAMERA CRAFT.

make it work. Formulas for universal developers are what photographic editors consider as good fill-in stuff for an otherwise empty space. The formulæ that come with the plates and papers you buy are likely to fit the goods. It is said that the manufacturers give them away with an object.

As to *modus operandi*, a few suggestions may help. For Portraiture: The same light always under the same conditions, the same exposure and aperture, and the same material manipulated in the same way—temperature being the same, are most likely to give the same results. I have never tried this out, but offer it for what it is worth.

For Landscapes: Get the planes right by arranging the mountains, rivers, trees, etc., at proper distances behind one another. Keep the sun out of the camera and be sure your slide is pulled out. Stop down for detail and open wide, especially with a single meniscus lens, for high art effects. Atmosphere is an essential and may be created in the developer. This chapter should have been preceded by one on focusing.

Focusing: Get a fairly sharp image on your ground glass. A microscope will help. Then stop down to a pinhole for landscapes, or a leaf or bough may escape you. Then allow for possible softness by developing in hydroquinone for black and white, and detail. This will give you etching effects such as no etcher could ever equal.

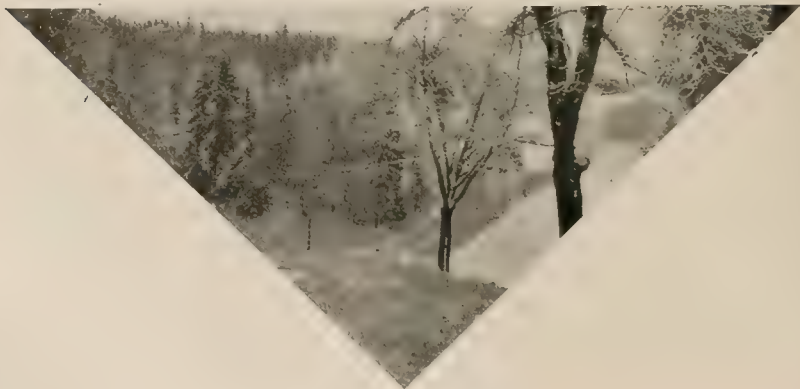
Printing: Use the same care to get results that you used in making the negative.

Developing: Avoid developers that are universal or that have more than ten ingredients. If you buy your solutions in bottles ready mixed, be careful to get them at a bargain sale. There will be less money wasted.

Exhibiting: Join a club or start one. Take a quiet hour when all or most of the members are away and tack your pictures on the wall. Get cards announcing a one-man exhibit. The medal will be awarded by you, to you, for the best print shown.

Reaching this stage, you can now begin to ask money for your pictures, or color them and pay people to accept them. To the uninitiated, all this is flip-pant. To those who know and understand, a world of philosophy has found its way into print.

Finally, remember what John Sebastian Bach said.



PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

ACID FIXING BATH: The acid fixing bath should be used with plates. They fix more quickly and are clearer and better than those fixed in a plain bath. Every plate maker recommends a certain formula, which is published on his formula sheet. Mix up the one that suits your plates, and mix the chemicals in the order in which they are given in the formula. Use sulphuric acid, as acetic acid is not suited when pyro is used as a developer. It keeps indefinitely in a large jug or bottle.—Smallwood, Illinois.

BEWARE OF DUST: The slide of a plate-holder that has not been used for some time will gather quite a coating of dust. This should be carefully dusted off before the slide is withdrawn, otherwise dust will be drawn into the light trap at the end, where it is liable to be dislodged and distributed over the surface of the plate as the slide is replaced after inserting the plate. It is well to blow out the inside of this trap occasionally with a pair of bellows or a large bulb fitted with a short length of rubber tubing.—E. L. S., New Mexico.

EXPOSURE: Correct exposure is the keynote of photographic success. I find, in developing films for amateurs, that some ninety per cent of their exposures could be given longer exposure to advantage. Many rolls are given to me to develop that produce only a few black spaces here and there. This is discouraging, particularly as many of them seem to think it is my fault. Why can't we have some sort of a ground-glass arrangement on every camera so that the worker could have the brilliancy of the image thereon as some sort of a guide as to the length of exposure required? The word "snap-shot" should be cut out of the English language. In good sunlight, using the lens wide open, a short exposure of one twenty-fifth of a second will suffice; with people moving about, must be made. The investment of a small sum in an exposure meter and the investment of a few hours' study of the subject, will repay any user of photographic material, many times over.—Smallwood, Illinois.

AN IMPROVISED FOCUSING SCREEN: By taking a piece of glass of the desired size, pouring a few drops of turpentine thereon, and rubbing with a piece of grindstone, using a circular motion, an excellent ground surface can easily be obtained. A little rubbing and the stone will soon begin to grind the

CAMERA CRAFT.

glass and it will take but a short time to produce an excellent substitute for the ground glass that came with one's camera. Care should be taken to place the sheet of glass on some perfectly level surface, with perhaps a folded cloth beneath should it be larger than 4x5, so that the pressure of the rubbing will not crack it. I have often replaced a broken ground glass by one made in this manner, and the suggestion may be helpful to some other reader.—An Amateur, Ohio.

TIGHT STOPPERS: If a glass stopper, one with a flat end, sticks in a bottle, a splendid plan is to make it fast in some way between two pieces of wood and then twist the bottle. As this gives considerable leverage, care should be taken not to break off the end from the stopper. If the case is a stubborn one, the usual remedy of hot water or friction may be first applied. The usual way is to grasp the bottle in the hand, place the end of the stopper in the crack between the door casing and the hinged side of the door, and close the door enough to grasp the stopper firmly. A slight wrench will usually "start something."—F. M. Steadman, New Hampshire.

PRINTING WITH AN ORDINARY LAMP: Take a piece of seven-eighths pine about twenty inches long and of a width equal to the outside length of the printing frame to be used. Nail a strip of the same material across the under side of each end. On the upper side nail two strips of half-inch-square wood, about twelve or fourteen inches long. These should be about one and one-half inches from the edges of the board and flush at one end, leaving the opposite end of the board clear for the lamp. Next make a block three inches



thick, as long as the board is wide, and just high enough to bring the center of the printing frame on a line with the flame of the lamp to be used, when the frame is placed on the top of the block. Measure back from the front side of this

block the thickness of the printing frame and there fasten a strip of wood about half an inch thick and four inches wide, taking care that it is parallel with the sides of the block. Next cut two grooves in the bottom of the block to fit the two half-inch strips on the upper side of the base board. This permits the block to slide back and forth on these two guides. At the other end of the base board nail a tin can or pail cover of such a size as just fits the base of the lamp. This assures the light always being in exactly the same place. Give all the rest of the device a coat of dark, dull surface satin, thus completing the job. Using this, the worker is assured of the light always being at the same distance with the frame at right angles thereto. Of course the block can be brought closer to the light and the base board should be marked off into even divisions so that a record can be kept of the actual distance used with any particular negative, for future reference when again printing from it. This distance and the time required can be marked on the negative with pen and ink.—E. L. S., New Mexico.



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Photography at the Panama-Pacific

Theodore Hardee, Chief of the Department of Liberal Arts, Panama-Pacific International Exposition, San Francisco, 1915, calls our attention to two letters recently sent out. One has gone forward to the manufacturers of photographic supplies and equipments, including moving-picture makers and manufacturers of their machines, asking that they consider the advisability of participating, explaining that the equipment, processes and products of photography will be shown in a most complete and characteristic manner, the Palace of Liberal Arts housing the exhibits. We ourselves would suggest that recipients at once apply for blank applications for space, exhibits classification and other information offered, and fill out and return the blank as early as possible. Others whose names did not happen to come before the department will of course understand that a full list could hardly be found available, and they should therefore make application for the same blanks and other information.

The other letter is addressed to those clubs and societies whose names were available—a list bound to be incomplete, and to individual workers, making up a list that is plainly insufficient, yet the only one available. Pictorial workers in this country seem to be rather spasmodic in their submitting of pictures to photographic salons and exhibitions and but few of the catalogues contain the addresses of the exhibitors honored. Our pictorial workers who fail to receive one of these letters should have no hesitancy in sending for blank applications for space and the information concerning selection and awards that will be forwarded upon request to the Chief of Liberal Arts, Panama-Pacific International Exposition, San Francisco. We might add that in filling out the blank, which is uniform with the blank sent to manufacturers and others, the pictorial photographer can disregard many of the questions thereon, simply stating the number of pictures he proposes sending and giving their approximate average size. For example, he might state that he would be sending ten and that their approximate average size was 12x14, despite the fact that one or two might be somewhat larger or smaller or both, perhaps none of them being really of the exact 12x14 dimension.

We can hardly do better than to quote a paragraph from the letter before us, the one last mentioned. It reads: "This Department is especially desirous of securing as representative an exhibition of Photographic work, particularly that having pictorial merit, as it is possible to obtain. To that end, you are requested to give the matter of exhibiting your most serious consideration. A

space equaling that devoted to any other art or craft in this building has been tentatively set aside for the domestic Photographic exhibitors, known as Group 33 in the Department of Liberal Arts. Class 124, one of the three classes into which this group is divided, is devoted solely to examples of Pictorial Photography, and it is desired that this class shall be as comprehensive and representative as possible of the artistic advancement of photography in the United States. This desire is accentuated by the interest and activity manifested by the foreign Governmental Commissions which are charged with the responsibility of collecting displays from their respective countries."

Sig. Bettini's Moving Picture Camera

In a recent letter to his American correspondent, the author of the article in our March issue, Sig. Gianni Bettini advises that the new models of his camera, now finished, are simply marvelous, and that he is certain that the greatest popularity will welcome them when they appear on the American market. There are three of these new models. No. 1 takes moving pictures on glass plates and also projects them upon the screen. No. 2 is exclusively for taking such pictures on films such as are used in ordinary hand cameras, the resultant negatives being printed as positives on glass plates for projection. Model No. 3 is a simplified form of No. 1, suitable for projection only, intended for those who may wish to purchase the positives on glass made by others. In addition to these three really scientific and practical pieces of apparatus, there has been designed a fourth, very simple as to mechanism, yet having all the characteristics of a real moving-picture apparatus, to be considered mainly as a toy for children. We are not advised as to the exact date of their appearance on the American market.

Mr. De Rome's Article Is Omitted

Readers who have been following the excellent series of articles which Mr. De Rome has been contributing to our magazine will be disappointed to find he is not represented in our pages this month. An extended trip through the East has consumed more time than was expected, with the result that his return is badly delayed. In addition, his time has been so fully occupied with business that he has found it impossible to prepare an article while traveling, as he hoped to when he left. We hope to have a continuation of the series in our next number and in the meanwhile would ask those interested to send in a good supply of prints to greet him on his return.

The Best Work

A man or woman in public or private life, who ever works only for the sake of the reward that comes for the work, will in the long run do poor work always. I do not care where the work is, the man or woman who does work worth doing is the man or woman who lives, breathes and sleeps that work; with whom it is ever present in his or her soul; whose ambition it is to do it well and feel rewarded by the thought of having done it well. That man, that woman, puts the whole country under an obligation.—JOHN RUSKIN.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Focusing Scales on Hand Cameras

F. C. Tilney, in *Amateur Photographer*, writing on this subject, after giving the usual method of making a single scale, proceeds:

"One of the most comprehensive scales is that suggested some time ago by C. Welborne Piper, which gives us two scales, that together enable us to tell when we focus on a point with a given aperture what distances before and behind that point are also in focus.

"The first thing to do is to decide with what aperture we shall start our scale, and assuming that in order to obtain satisfactory definition we shall rarely use larger stops than f-8, then we first of all draw a scale which shall be divided into one-hundredths of this aperture in inches or eight divided by one hundred, which is practically equal to one-twelfth inch.

"We then require to find the nearest points in focus with each aperture of the f-8 series, that is f-16, f-24, f-32, and f-64, and use the formula $100 f^2$ divided by aperture, and we get again, with the five-inch lens:

100 times 25 divided by 8, or 26 feet
 100 times 25 divided by 16, or $19\frac{1}{2}$ feet
 100 times 25 divided by 24, or 13 feet
 100 times 125 divided by 32, or $9\frac{3}{4}$ feet
 100 times 25 divided by 64, or 5 feet

"We have only given the distances in round numbers. Then, having drawn the scale which is shown exaggerated herewith, we write above the marks the above distances:

Inf. 26 $19\frac{1}{2}$ 13 $9\frac{3}{4}$ 5

We also draw another scale of exactly the same length, and divide it into twelfths of an inch as before, and below the divisions on each side of the center we write the aperture of the stops:

64 32 16 8 8 16 32 64

Then we have only to set the pointer in the center of the second scale at any distance

on the first scale, and we can read off the distances between which objects will be sharp with any given aperture. For instance, suppose we set the arrows at 13 and are using f-8; then objects between nine and three-fourths and nineteen and one-half feet will be sharp. The end of the first scale, marked infinity, must be set, of course, to the infinity mark of our camera.

"If it is desired to calculate a similar scale, using f-5.6 series of stops, that is, f-11, f-22, f-33, f-44, and so on—then the divisions of the scale must be 0.056 inch apart, and the table of distances will be calculated out, starting with $100 f^2$ divided by 5.6, etc. Any one can work both series of scales out separately on paper, and then with a pair of dividers and a fine scale set out the distances on a piece of white ivory or celluloid.

"There is yet another method, which for practical purposes may possibly be thought as good as any for making a distance scale on the hand camera. This is to measure out the actual distances, and test them in the camera, marking each distance as it is ascertained. It is necessary in this case that the camera should have a focusing screen, and care should also be taken to see that it is in perfect register. The camera is best used for the purpose in view on a tripod, and the best subject for the trial that can be suggested is a hoarding covered with posters in big type. The required distances, say two, three, four, six, ten, fifteen and twenty yards, are carefully measured out, and the camera sharply focused from each spot. The ivory scale, which can be fixed in approximately the correct position beforehand, can be marked forthwith with a fine-pointed pen and waterproof ink, and engraved later.

"If a suitable poster station is not available, the next best plan is to focus the figure of a friend at the required distances. In this case the camera can remain at one spot, and the friend can move to the differ-

ent distances. This is probably one of the best methods of fixing the scale, as not only is the result likely to be correct, but the photographer will incidentally obtain a good idea of the size the figure becomes at certain distances."

An Instantaneous Light-Tight Blind

The search for a dark room blind, by which a room may be turned quickly from absolute light to absolute darkness, has puzzled many an amateur photographer. Most blinds insist on letting light leak in round their edges. Those who are still puzzling would do well to try the arrangement detailed below. I have it in working order in my own dark room, and find it in practice thoroughly effective, essentially simple, quick-acting and cheap. Anyone with the slightest pride in his skill as a carpenter could fit it up for himself.

To make the blind a piece of material (for description of this see further on) is taken rather larger on all sides than the window; and one edge of this is nailed along the framework above the top of the window (not on the top of the window itself). The material must be made so wide that when it is pulled down, it overlaps the framework of the window on each side by one and a half inches. Two strips of wood are then taken, the height of the window and about two inches broad, and these are hinged one down each side of the window frame in such a way that when they are closed the edges of the material are clenched between the hinged strips and the framework, and all light leaking in at the sides, the main source of trouble, is excluded. When the blind is to be pulled up or down, the hinged strips are, of course, folded back out of the way; as soon as the blind is down they are folded over, and make the edges light tight.

Many people have tried fixed grooves of wood to stop light leaking around the edges, only to find that they must be six or nine inches deep to be effective. These hinged strips are in effect hinged grooves, adjustable grooves, which clamp the blind edges so closely between themselves and the framework that the exclusion of light is perfect and absolute.

Such is the main idea. Now for one or two details. If the material overlaps the edge of the window frame by one and a

half inches, then the hinges should be two inches from the edge; in other words, the edge of the material must not be allowed to jam right up into the hinges, or it will interfere with their closing properly. The hinges must be sunk into the wood flush with its surface, otherwise there will be a chink through which the light can leak. The hinges should be stiff-working, not loose.

Light can best be stopped from leaking round the bottom of the blind by fixing a strip of wood along the bottom of the window, at an angle to it, and forming with it a trough. To the bottom of the blind material, an ordinary wooden roller is fastened; and when the blind is pulled down, the wooden roller drops into the trough as far as it can go and completely excludes light. By the aid of this roller the blind can be re-rolled by hand in two or three seconds, and no other device is necessary; this makes the best and tightest job. It can be secured at the top by a string and an ordinary blind fastener fitted upside down.

The material I am using for my own blind is black Lancaster blind material, made especially for photographic work. The price varies with the width of the strip; in the fifty inch size it costs only one shilling five pence a yard. For a window receiving the direct glare of a summer sun, a double thickness might possibly be necessary; but even then I doubt it. If it is allowed to crease, pinholes will appear; but then it never need be creased.

Personally I have found it best not to try any experiments with blinds made of red material. On a midsummer day too much light passes through it, on a dull day not enough, at night none at all. If I do not want full daylight, I shut it out altogether, and rely on artificial light, which is constant.

One final advantage of this blind may be noticed. The fittings are all on the window frame, none on the window itself; so that this is free to slide up and down as before and that important consideration, the proper ventilation of the room, is in no way interfered with.—R. C. in *Photography and Focus*.

Notes on Night Photography

The large number of night photographs, taken in London and New York, which were shown before the Royal Photographic Society recently by R. Williamson, are the re-

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sult of a special method of development which has been perfected by the author of the photographs himself. Mr. Williamson is a Liverpool engineer who has devoted his leisure to night photography, and being dissatisfied with the development of the plates by the maker's formulae, he has worked out tentatively this new development method.

In the course of his lecture he stated that, from the point of view of the development of the plate, night subjects should be divided into three classes, each requiring different treatment. The first class included those in which the contrast between light and shadow was small, and the lights themselves were absent. Here, the contrast being somewhat similar to that obtained with daylight exposures, any ordinary development would suffice, providing the exposure was correct. The second class, to which he mainly devoted himself, consisted of subjects containing strong artificial lights, in which the contrast between high lights and shadows was extreme. The third class included the subjects necessitating a short exposure, with a view to portraying moving traffic and objects. With regard to the second class, he said that he judged the exposure to have been correct when the first appearance of the image was noted ten minutes from the commencement of development. It was desirable to have a fixed formula for development, and up to the first appearance of the image it was his custom never to alter the solution, though afterwards he never hesitated to add to or modify it. His formula was as follows:

A:

Pyro 1 dram
Potassium metabisulphite..... ½ dram
Water to make..... 5 ounces

B:

Soda carbonate ½ ounce
Sodium sulphite ½ ounce
Water to make..... 10 ounces

For each dish he used one-half dram of A and two drams of B, adding water to make five ounces. The dish was rocked occasionally for five minutes, and then an equal quantity of B was added. Immediately upon the appearance of the image the developer was diluted with water, this dilution at the proper time being most important. It was seldom, of course, that the correct exposure was hit so as to allow of the appearance of

the high lights in ten minutes. If incorrect, the composition of the developer must be altered in the later stages. Many dodges were required, depending upon the amount of over and under exposure. If the image appeared in less than ten minutes, the developer was immediately further diluted, and one or two drops of potassium bromide were added.

The use of potassium bromide was advantageous in the early stages of development to restrain any powerful light or lights. His formula limited the number of drops in two ounces of developer to between one and four (ten per cent solution). In subjects with powerful electric lights in the foreground, and in which the exposure was sufficient to give reversal of the light, four drops were necessary. With less contrast the bromide was also diminished. The temperature of the developer was also important, the most suitable being fifty-five degrees Fahrenheit, this giving the least halation, and allowing as much detail as possible in the shadows to develop.

The third class of night subject, in which exposures were necessarily short, demanded a development which was very tedious and difficult, and Mr. Williamson's own description of his complicated method, which was similar in principle to the foregoing, had better be consulted when the paper appears in print.

Some of the night photographs shown were of extreme interest. Apart from street scenes and the like, a remarkable example was a candlestick taken only by the light of the candle itself, and another was a paraffin lamp, again taken by its own light, the exposure being something like six minutes at f-23. His pictures of the incandescent mantle and the electric lamp, the one showing clearly the mesh and the other the filament, were excellently rendered. The Hydra plates, although only a few of his subjects were taken on there, he considered a valuable addition to the night photographer's outfit, though a somewhat increased speed would be an advantage.—*Amateur Photography*.

Cold Light

Professor Charles Dussaud, of Paris (a pioneer of wireless telegraphy), has recently given a demonstration in London of what threatens to be a veritable revolution in light-

ing power, which will be of particular interest to photographers. By its use, the production of heat in the use of electric light in lanterns and cinematographs is entirely avoided, hence its title, "cold light." At the demonstration he proved conclusively, by experiment, that the light could be enclosed in a projecting lantern, with paper as a substitute for Russian iron, without the slightest risk of overheating and fire. He also showed that such interesting objects as the interior of the human mouth and throat could, by its means, be projected onto a screen for demonstration or other purposes in their natural coloring without the slightest inconvenience to the owner from the heating of the lamp—a tiny thing an inch or so in diameter. For lanternists the special advantage was shown to be that lantern slides made of film could be safely used in place of glass, thus avoiding the annoyance of weight, expense, liability of breakage, and difficulty of conveyance.

The system is a highly ingenious one, and it combines with the absence of heat an enormous increase in lighting power. To be strictly unscientific, every one knows that if a lamp is attached to a higher voltage than that for which it is made, it gives a fine increased light for a short time and then bursts. Professor Dussaud attaches an ordinary four-candlepower lamp to double the voltage for which it is made, and it gives at once one hundred candlepower light; nor does it burst, or even grow warm. He obtains this end by interrupting the current. This can be done with a single lamp by cutting off the current for the fraction of a moment and then restoring it, and repeating this operation; or, better still, by using three of the small lamps revolving, so that each one touches a contact and is lighted, and then has a double period of rest, during which such fraction of heating, if any, as it has received is cooled out and lost. So far as the eye can perceive, the lighting is continuous. Actually, the three little lamps are revolving. One is lighted, is revolved past the point of contact, and the next then glows in its place. The immense increase in lighting power is obtained without any increase in consumption. The advantage of this to the lanternist should be incalculable, and the densest color slides should be showable from the ordinary domestic supply. It is claimed that by the use of this non-heating light celluloid may be safely utilized in the cinematograph. Moreover, the light

can be produced from quite a small battery or accumulator, and therefore in an unwired building. It was quite a revolution in itself to see a tiny lamp in work at the demonstration showing bravely a colored slide in a four-yard circle on the screen, and shaming by its performance an arc lamp in a lantern double its size on a neighboring table. A special advantage of this system for the cinematograph should be that by its use the film can be stopped at any moment for demonstration or other purpose for any length of time.

The above is from *Amateur Photography*, and a further discussion of cold light can be found in a paper by Professor H. E. Ives, read at the International Congress of Applied Chemistry, published in the *British Journal of Photography* of May ninth.

Exposure In Chromium Intensification

Several correspondents have raised the question of the necessity for exposure of the bleached image before re-development, and it may be interesting to explain exactly how this matter stands, for it so happens that exposure may or may not be desirable according to circumstances. If a negative image is turned into bromide or chloride of silver by the agency of either pure bromine or pure chlorine the result is quite undevelopable without exposure, and is also so sensitive to light that a very little exposure will solarize it. To develop the image up to its original density, exposure must be very exact, otherwise the final result will be too thin, owing to either under or over-exposure. Suppose, however, we use a bleacher containing no free chlorine or bromine, and depending for its effect upon a more complicated chemical reaction, then the resulting image does not consist simply of silver bromide or chloride, but is of a more complex nature, and is easily developable without any exposure to light at all. The probable reason for this was suggested in an article by Welborne Piper in a recent issue. Such an image is produced by the mixture of potassium bromide and ferricyanide employed usually for sulphide toning, and also by the bichromate and hydrochloric acid solution used in chromium intensification. This latter solution, however, is capable of modification, and both its constitution and its effects vary to some extent with the proportion of hydrochloric acid present.

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With very little acid, it seems that the acid and the bichromate combine to produce potassium chloro-chromate, which compound alone in the pure state serves excellently for intensifying purposes, but if the acid is in excess then free chlorine is also formed, in the presence of which a certain amount of pure silver chloride must be produced in the image. In this case some part of the image is not only undevelopable without exposure, but is also very readily over-exposed, and therefore development may not reach the full density that is required, or that would be possible if all conditions were favorable. The image produced by a bath containing less acid is also more or less readily solarized, but as exposure is not needed with this bath at all there is no need to risk solarization. Very strong light being necessary to produce detrimental effects in this case we can work with safety in gaslight or weak diffused light, provided the exposure is not too long. The effect with the other solution will, however, be more uncertain. The amount of chlorine formed is very variable, and depends to some extent on time. The resultant image, therefore, may or may not require exposure, and may or may not be quickly affected by over-exposure. To get the best results it is well to be cautious in the matter of exposure, keeping the plate away from the light until the developer has been poured on, after which solarization is impossible. An even better precaution is always to use a quite freshly mixed solution, which will usually contain much less free chlorine than a stale solution. Strongly acid solutions are not very useful for intensification in any case, for they can at the best give only a slight increase of density. It is generally wiser to keep to the B solution given in the "Almanac," and avoid solarization trouble by being cautious in the matter of exposure. As a rule we do all intensification work in the dark room by the light of a yellow lamp used for bromide work.—*British Journal of Photography*.

A Simple New Color Process

We hear from an American correspondent of a new process for taking and projecting motion pictures in natural colors. It is the invention of a wealthy American gentleman, and it is particularly adapted to the amateur's needs. Its main advantage is its extreme simplicity—especially in the taking and ex-

hibition of the films. No specially equipped projection apparatus is necessary to exhibit the pictures taken by the new process. The films may also be shown with the ordinary lantern employed for black and white pictures, and no additional lighting apparatus is required. The new process is termed "cinecolorgraphy." Here is a brief description of the working principles of the "cinecolorgraph." When the picture is taken, a prismatic lens is used on the camera, which divides the rays of light, forming two images, which are projected on to two different films. The light cast on to one film, which, of course, is a negative one, is made to pass through a green piece of celluloid, and the other through a piece colored red. Two negatives are thus obtained, which are developed in the ordinary way. Then an ordinary piece of positive film—with emulsion on both sides—is run through the printing machine, with the two negatives on each side. A special "printer" has to be used for this purpose, having rollers for three pieces of film instead of for two as in the ordinary printer.

The positive thus obtained is developed and fixed, and when complete is coated on one side with a green tint, and on the other side with red. The side upon which the original red negative was printed is the one colored red, and the side exposed to the green negative is the side upon which the green coloring is placed. The film is then finished, and when run through an ordinary projection machine will show the objects photographed faithfully reproduced in their natural colors.

The process, we understand, has been patented for "still" photography also, but the cinematograph application is being developed first, because of the greater demand in America for pictures of this kind.

Our readers will be familiar with the fact that the proper blending of red and green will produce almost any color found in nature. This was fully demonstrated in our recent explanation of the "kinemacolor" process. In "cinecolorgraphy" a yellow film can be used that will add a yellowish color to the objects photographed, which were originally yellow. This marks an additional color to the many obtained by the combination of the green and red. The remarkable part of this process lies in the camera alone.

The splitting up of the different rays of light, and the manner in which they are absorbed by the red and green celluloid screens, is the wonderful and almost unexplainable feature of the process.

If the success of the cinecolorgraphy during experimental work is any criterion, and the demand on the part of the public for natural-color pictures is large enough, this new process will become the thing of the future in motion photography, and will probably revolutionize the cinematograph industry.—*Amateur Photography*.

Ferro-Prussiate Printing for Blue or Green Tones

H. B. Newcomb, writing in *Amateur Photographer*, says: Of late years the ferro-prussiate method of printing, for pictorial work, has been greatly neglected. Most amateur photographers look upon the process with a scorn which, to my mind, it by no means merits. Apart from its great simplicity and almost infinitesimal cost, it will, in the hands of a careful worker, yield results which are seldom, if ever, beaten by the finest blue or green toned bromides.

All the chemicals that are necessary are some ferric-ammonium citrate, either the green or brown will do, some potassium ferricyanide, some ammonium chloride (common salt), and a little potassium permanganate. These, together with a sheet or two of some good cartridge or drawing paper—the smoother varieties of which are easier to coat—and a flat hog or camel-hair brush, comprise all the materials that are necessary to work the process. Having obtained these, operations are commenced by first making up the sensitizing solution; this is composed of:

A: Ferric ammonium citrate,
 green 100 grains
 Water 1 ounce
 B: Potassium ferricyanide 40 grains
 Water 1 ounce

The alternative formula, should the brown ferric salt be used, is:

A: Ferric ammonium citrate,
 brown 80 grains
 Water 1 ounce
 B: Potassium ferricyanide 60 grains
 Water 1 ounce

In both the above formulæ, take equal parts of A and B.

Either of the above solutions, if stored in

the dark, will keep good for a considerable length of time. It is always advisable to filter before use. The paper to be coated is pinned to a board and rapidly and evenly brushed over with a little of the sensitizing solution, in the same manner as with bichromate for the oil process. This should be done in artificial light, always taking care to get an even coating. The sensitive sheet is then hung up to dry, either in the dark or in artificial light, after which it is ready for use. Printing is best carried out in direct sunlight, as the paper is very slow, and should be continued until there is a distinct suspicion of bronze in the deepest shadows, or until the highest lights are faintly tinged with blue. The print is then "developed" by washing in water, which should be continued until the washings are quite free from the slightest trace of color. This gives a blue print on a white ground, and has only to be dried to be ready for trimming and mounting. Should the color not be considered bright enough, it can be improved by passing the print through a one per cent solution of hydrochloric acid. Over-exposed prints can be reduced by immersing them in a weak solution of sodium carbonate; one grain of carbonate to every ounce of water is generally sufficient.

To obtain green tones on ferro-prussiate paper, it is necessary to print until the shadows are well bronzed over and until the highest lights are very distinct blue in color. This is absolutely essential, as the subsequent toning bath has a very decided reducing action. The over-printed paper is "developed" in the usual manner, and, after washing, is immersed in a solution of:

Potassium permanganate 8 grains
 Sodium chloride 62 grains
 Water 40 ounces

For local development, it is advantageous to dilute the above solution with a further quantity of water. This will slow the action, and so enable the worker to go more deliberately to work to obtain the effects he wants.

This solution will tone the image green, the depth and color of which are dependent on the degree of printing and time of immersion in the toning bath. With most papers, if not all, the permanganate bath is inclined to stain. This is not objectionable, as the color is a creamy yellow which gives the effect of a cream ground, which is really

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more suitable for a green print than a white ground. It also tends to make the lighter portions of the print a yellow green, similar in effect to sunlight on spring foliage. Should the stain be considered objectionable, it can be removed by passing the print through a weak solution of sodium sulphite, to every ounce of which has been added a minim or two of hydrochloric acid. Prints that are required to be in two colors should be so shaded during printing that the portion to remain blue receives a normal exposure, while that which is to be toned green is over-printed. It is then a simple matter, if the subject is one with an unbroken horizon, to immerse only that part which is to be toned in the permanganate solution, always taking care to keep the print in motion so that the toning solution does not act quite so long near the horizon and thus obtain a picture in which the green does not suddenly change to blue. This will be more true to art and nature than it otherwise would be were the change abrupt. After toning, it only remains to well wash the print by soaking in several changes of water. Running water should not be used, as too violent a wash tends to weaken the colors. This is all that need be said about the process, and if the worker carefully carries out the foregoing instructions he will have no difficulty in obtaining really charming color effects.

Coin in the Slot Photography

We recently received inquiry as to the method of obtaining rapid paper portraits by this means. The *Amateur Photographer* gives the following description of one of these machines in use in France:

"The automatic machine which was recently introduced in Paris for supplying finished portraits on bromide paper in three minutes has been the subject of some comment in this country, but a technical description of it has not, so far as we are aware, gone further than the columns of our Parisian contemporary, the *Photo Revue*. The instrument, which has the appearance of an ordinary slot machine, and is equipped with illuminating apparatus, reservoirs containing solutions, and so on, is a marvel of ingenuity. The client introduces a coin in an aperture, and seats himself upon a stool. Thereupon a bell rings, and an inscription appears: 'At-

tention! Turn the head to the right, look at the red cross, . . . and smile.' Then an arc lamp is lighted at the opening, in such a manner as to illuminate the head and bust of the sitter, a small concave mirror acting as a sort of finder. The second inscription now makes its appearance: 'Don't move!' The exposure being made, the final inscription slips into place: 'Thank you! You are at liberty to get up. In three minutes your portrait will appear at the foot of the apparatus.'

"It is interesting to learn of the great activity within the instrument during the three minutes between exposure and delivery of the portrait. The sensitive paper is first treated for twenty seconds with metol-hydroquinone and caustic potash developer, brought to it from small reservoirs, after which the waste developer is sent by means of funnels to the base of the apparatus. The image then undergoes an acid bath, and the negative obtained is treated by a potassium bichromate solution. A rinse follows in water to which some sodium sulphite has been added, a fresh supply of developer arrives in the celluloid tank, and a lamp is lighted, giving reversal of the image. The image is then fixed in hyposulphite of ammonium, which is preferred to hyposulphite of soda, because it is eliminated more easily; and afterwards it undergoes several baths of water containing an oxidizing agent, and, last of all, water containing formol, in order to harden and insolubilize the gelatine. By the attraction of electro-magnets a funnel is then opened, and the photograph falls on a tray, where it is dried for twenty seconds by rapid revolution. Finally it is fixed on a metallic support and slips out at the opening. The lights in the resulting photographs are said to be very pure, and the shadows vigorous. The machine, which is the invention of Harry Ashton-Wolff, produces one hundred such results before requiring to be re-charged."

A New Bromide Toner

Dr. F. Kropp, writing in *Photographische Rundschau*, gives the following formula for obtaining fine sepia tones by a single solution process. Immerse the print for twenty to thirty minutes in a bath compounded of:

Arsenic acid 10% solution.....	1 ounce
Citric acid	1 ounce
Potassium bichromate	1 ounce
Water	12 ounces

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Non-Abrasion Developer

An Illinois correspondent asks for a formula for non-abrasion developer and the following may meet his wants:

Metol	15 grains
Hydroquinone	60 grains
Sodium sulphite, anhydrous....	240 grains
Sodium carbonate, anhydrous....	400 grains
Potassium iodide	20 grains
Potassium bromide, 10 per cent solution	35 drops
Water	20 ounces

The developer and the fixing bath must be kept cool during the warm months of summer, as temperature has a decided effect on the tones obtained with this developer. Too warm a solution gives brownish blacks, while too cold a solution tends to bluish tones. With the solutions neither too warm nor too cold, any variations from a good black tone are due to either over or under-exposure of the paper. When developed, the whites of the prints are yellow in tone, but this color disappears as the complete action of the fixing bath takes place.

A. W. Vero, writing in the *British Journal of Photography*, strongly recommends the following formula for dealing with these troublesome blemishes on bromide paper. He says:

After fixing and slight washing, rub over with a sponge saturated with the following, preferably in a large dish, so that none is wasted, as it may be used over again until exhausted.

Water	5 pints
Cyanide of potash.....	1 ounce
Tincture of iodine.....	1 ounce

If prints are for glazing, they will be improved by a slight pass through an alum solution to take away the slippery surface.

The above formula has also other valuable points, among which it may be used for cleaning the silver from developing dishes, and perhaps its best point is that it entirely removes the brown stain on the nails and

fingers caused by the use of diamidophenol, especially if made strong, i. e., the above ingredients to ten ounces of water. This strong solution is the finest reducer that can be used for plates or paper; it keeps well, and does not stain; in fact, it is a valuable addition to any photographer's outfit, but must be labelled "deadly poison."

Developer for Black-and-White Work

A correspondent writes of his ill success in trying to get suitable negatives of plans and other black-and-white work, assuring us that experiments have shown him that his fault is not in exposure or lighting, but in the developer, despite the fact that he has tried several formulas recommended for excessive contrast. At least some of these formulas should give him the desired results if his exposures are right and the plates are protected entirely from any danger of fog, but he might try the use of a bichromate solution as recommended by W. S. Davis some years ago in *Photographic Times*. As it was also advised as a means of recovering fogged plates, it should give our correspondent some results. The solution is made up as follows:

Potassium bichromate.....	10 grains
Hydrochloric acid.....	5 minims
Water	4 ounces

Plates are to be placed in this for two minutes, then given one or two minutes' washing in running water, after which they are given a bath in alcohol to accelerate drying. This treatment slows the plate considerably, making the ordinary fast plate about the same speed as the slow or process ones. A further recommendation is to add the bichromate to the developer rather than to bathe the plates, the suggestion being to add several drops of a ten per cent bichromate solution containing twenty drops of hydrochloric acid to the ounce, to each ounce of a metol developer. Our correspondent can give this a trial. We did know a worker who secured

good results along this line, but he is not available for information at this time.

A Liquid Glue

An Ohio correspondent wants to know how to make liquid glue. All that is necessary is to get a good quality of the hard glue, break it into chips and dissolve these in acetic acid under heat. This is accomplished by putting the glue and acid in a small porcelain saucepan, which is itself immersed in a larger vessel containing hot water. In other words, the glue is dissolved in the acid by means of a hot-water bath. It can be made of any desired consistency by adding more or less of the glue, and it will remain in a liquid condition as long as it is not spread out thin as when used.

Brown Stains on Developing Paper

The fact that our complaining correspondent gets the stains with each of several developers which he has tried proves quite conclusively that it is not his developer but his method of fixing that is at fault. A developer is a developer mainly because it is an oxydizing agent, that is, capable of blackening the silver in the paper, and by so doing producing the image. The result is that it will, itself oxidize, turn brown, as we all know it does, when exposed to air. When a print comes out of the developer the gelatine emulsion on its surface is saturated with this developing solution, already started on its way to oxidation. The print goes into the fixing bath and, if not slid in carefully and moved about a few times, may be left there to fix with the fixing solution in contact with the surface except at one or two points where a larger or smaller bubble of air is confined or held beneath the print. Almost the same effect will result should a portion of the surface come in contact with another print so closely that not sufficient fixing bath to stop action of the developer lies between the two. The result is that the air bubble or the surface of the other print keeps the acid fixing bath from diluting the developer with which the film on the print is saturated and that developer keeps right on and oxidizes, producing the stain. The prevention of such stains is not a matter

of changing the developer or the acid fixing bath for another of a different formula. It is simply a matter of so placing the print in the fixing bath that the bath will have immediate action on every part of its surface, that is, so that the fixing bath is not prevented from acting by confined air in the form of a bubble or by contact with the surface of another print.

The Light of Fire-Flies

In reply to a correspondent, the nature of the light emitted by fire-flies has been the subject of speculation for many years, and it has generally been described as phosphorescent. An article in *Nature*, nearly two years ago, from which the following notes are abstracted, gives results of experiments in testing the light given by fire-flies, by means of photographic plates.

The investigators who carried out the experiments, state that they observed the beautiful green fluorescence of the light emitted by an insect of the genus *Luciola*, of the family *Malacodermidæ*, and were led to inquire whether the light was of the nature of the X-rays produced in the Crookes tube.

An inquiry was instituted to see how this light affected photographic plates, especially when media of several sorts were interposed between the plates and the source of light. The media tried were wood, dark brown leather, flesh (mutton) and black paper. After several trials, it was found that the plates were affected after exposure for two hours through flesh and black paper, and three hours through leather and wood.

The trials showed further that, as far as its effect on photographic plates is concerned, insect light is similar in intensity to lamp-light, but it also has the important characteristic that this intensity is not varied, even when objects opaque to ordinary light are interposed between the insect and the plate. This light is intercepted by glass, in which respect also it differs from ordinary light.

It is concluded that the light of the fire-fly experimented with is not phosphorescent. It may, on the other hand, be premature to conclude that the light rays emitted by the insect are the same as X-rays, but it may safely be asserted that they are similar to the X-rays and the ultra violet light, in that they render certain opaque media transparent, and are intercepted by glass.

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West Virginia—William E. Monroe, Box 298, Point Pleasant.

German—George N. Baumiller, Nutwood, Ohio.

FOREIGN SECRETARIES.

French—Charles A. Wargny, 247 Torrence St., Punxsutawney, Pa., U. S. A.

German—George N. Baumiller, Nutwood, Ohio.

NEW MEMBERS.

3680—Chas. H. Denniston, Pulteney, N. Y. Class 2.

3681—John Thomas, Orland, Cal. Class 3.

3682—Guillermo N. Milke, No. 5, Merida, Yucatan, Mexico.

4x5 and post cards, various papers, of typical Mexican views, ruins, Yucatan landscapes, street scenes, etc.; for landscapes, street scenes, general views, still life, flowers, etc. Class 1.

3683—G. E. Carpenter, Box 123, Port Huron, Mich.

2½x4¼, developing paper, of general outdoor work; for anything but lantern slides or stereoscopic views. Class 1.

3684—W. J. Willis, U. S. S. Newport, care Postmaster, New York City. Class 2.

3685—W. T. Adams, Box 174, Greenville, S. C. 3¼x5½, developing paper, of landscapes, and outdoor views; for landscapes. Class 1.

3686—Miss Julia Colin, R. F. D. No. 1, Le Sueur Center, Minn. Class 2.

3687—A. Grootenboer, 414 North 10th Street, Paterson, N. Y.

3¼x4¼ and 4x5, developing paper, of bits of woodland scenes in and around towns; for the same; prints mounted and unmounted. Class 1.

3688—Miss Elizabeth L. Money, Oakville, Cal. Class 2.

RENEWALS.

1777X—4x5 and post cards, desires to exchange children, flowers, fruit on solio or developing paper; would like to correspond with members interested in gum printing. Class 1.

CLUB NEWS AND NOTES

- 2954—Anton W. Lachnit, 822 E. 8th Street, Columbus, Nebr.
5x7 and smaller, various papers, of general subjects; for the same; post cards only. Class 1.
- 2959—S. J. Neville, Cottonwood, Sask., Canada. 4x5 to 8x10, developing papers, of landscapes, East and Middle West snow scenes, animals wild and domestic; for Southern and tropical views, marines, or anything but portraits and street scenes; will do careful work and expect to receive same. Class 1.
- 2990—James L. Vaughan, R. F. D. No. 1, Belvidere, N. Y. Class 2.
- 3390—D. M. Wogaman, South Canon, Colo. 4x5 and post cards, developing paper, of general landscapes, and street scenes; for the same or anything of interest; post cards only. Class 1.

CHANGES OF ADDRESSES.

- 3118—E. W. Cochems, R. F. D. Box 120, Hynes, Cal.
(Was Los Angeles, Cal.)
- 3203—C. B. Powell, M. D., Bemidji, Minn.
(Was Madison, Minn.)

- 3447—J. P. Edwards, 2109 E Street, Sacramento, Cal.
(Was 905 H Street, Sacramento, Cal.)
- 3477—G. L. Fitzwilliams, Hibbing, Minn.
(Was Lewiston, Minn.)
- 3499—Max Gartner, 154 South Delacey Street, Pasadena, Cal.
(Was 162 East Villa Street, Pasadena, Cal.)
- 3501—W. A. Cooper, 142 Court Street, Plymouth, Mass.
(Was Montclair, N. J.)
- 3538—George H. McLavey, 67 Cornelia Street, Utica, N. Y.
(Was 234 Mary Street, Utica, N. Y.)
- 3548—Frederick B. Sanford, Lock Box 677, Grants Pass, Ore.
(Was Dothan, Ore.)
- 3577—Ira Lamb, Milford, Nebr.
(Was Sargent, Nebr.)
- 3581—Fred E. Taylor, R. F. D. No. 1, Carson, Iowa.
(Was Oakland, Iowa)
Now has 3¼x5½ instead of 2¼x3¼.
- 3644—Louis E. Hastings, mgr. N. P. Lunch Room, Pasco, Wash.
(Was Box 608, Pasco, Wash.)
- 3655—S. W. Glere, Glenwood, Minn.
(Was Northfield, Minn.)

CLUB NEWS AND NOTES

**Club Secretaries and others will oblige by
sending us reports for this Department**

Cleveland Camera Club Exhibition

An exhibition of the work of the members and their friends will be open during the last two weeks in July. The exhibition will be held in Case Library, on the eighth floor of the Caxton Building, Cleveland. About two hundred pictures have been pledged to the committee, including numerous examples of pictorial, portrait, genre subjects, color plates, etc. In addition there will be some interesting examples of commercial and technical photography. Information in regard to the exhibition can be secured from A. D. Williams, Secretary-Treasurer, Box 102, Cleveland, Ohio.

Inquiries for "Agfa" books have been received by the Berlin Aniline Works, that, owing to oversight on the sender's part, cannot be given attention. Following is the list: No name signed, Martinsville, Ohio; Toronto, Canada; Keating Summit, Pennsylvania; West Unity, Ohio. No address: John L. Marks; Berger Brothers. No name and no address, envelope postmark blurred, one. If these inquirers will send name and address to the Berlin Aniline Works, 213-

215 Water Street, New York, books will be gladly sent.

Atlanta Camera Club

On April third, after some deliberation and advertising, six camera enthusiasts were present and formed a temporary organization; and, at a later meeting held April fifteenth, formed a permanent association. This last meeting gave a much better indication of the local interest than the former one, some forty members signing the charter roll. A lantern slide exhibition was given those present. On April twenty-ninth, the constitution and by-laws were passed upon, being found very efficient and comprehensive.

Since that time the meetings have increased in interest and the attendance augmented in numbers until the Club is now in a thriving condition, with club-rooms of its own occupying the entire third floor, southwest corner Broad and Alabama Streets. It has an assembly hall, studio, large dark-rooms, and enlarging and lantern slide rooms. Several handsome donations have been made by local firms and others are assured. The Club has furnished the assembly hall in a pleasing and

fitting manner, the indirect lighting system lending a soft effect which eliminates all glare in viewing the many prints with which the walls are adorned, the work of members.

A delightful smoker was given on the evening of July first, at which members and their invited friends enjoyed a very interesting lantern slide exhibition, besides refreshments of a mild character. An outing was planned for July fourth. Other features and demonstrations will be given periodically. The Club now has between sixty and seventy members. Meetings are held the second and fourth Tuesdays of each month. The officers are: E. F. Marston, President; Roland B. Hall, Jr., Vice-President; L. O. Surles (founder of the Club), Secretary; C. A. Werber, Treasurer; with Librarian not yet appointed. The Board of Control consists of the officers and: Alfred Austell, H. M. Askew, Wm. H. Hyde, P. R. Holland, J. A. Murdoch and Al Bartlett. Manufacturers and dealers who wish their products or apparatus tried out may communicate with the Secretary, L. O. Surles, 231 East Pine Street, to whom all communications should be addressed.

Cleveland Camera Club Outing

The recently organized Cleveland Camera Club held its first outing on June twenty-ninth, at Bedford Glen. A most enjoyable time was had by all attending. A basket lunch, brought down by some of the late comers while the earlier arrivals were hunting out the picturesque localities, was eaten at the pavilion. Without their knowledge, the outing committee had decided that the ladies of the party should be the subjects of the prize competition, and the result was a considerable amount of surreptitious plate spoiling. A swimming hole was located at a retired point in the gorge and some of the members found it afforded some very interesting views. There was an old mill which possessed attractive possibilities, a number of leafy vistas and a multitude of diminutive waterfalls. It is planned to revisit the glen at an early date in order to take advantage of these explorations.

Illinois College of Photography

Tennis is the order of the day with all those who are not trying for the baseball team. The courts are being put in first-class shape and there will probably be a strong club this year.

Clyde Walters recently returned to his home after finishing the photographic course. He will open a studio somewhere in Pennsylvania. His photographic outfit and personal effects became involved in the Ohio flood on his homeward trip and have not yet been recovered.

Messrs. Hongue and Kondo, two Japanese students of A Class, captured the prizes in the monthly portrait contest last month.

J. W. Beattie, demonstrator for the Cramer Dry Plate Company, spent a day at the College last month. George Eppert, of the Hammer Company, also called and gave the students an interesting talk.

We received pleasant visits last month from former students W. F. Selle, 1910; Fred Rulstrand, 1910; Charles Merkel, 1908; Paul Navarro, 1908, and former instructor Theodore Howe.

Fred Manler, of Carlsbad, Bohemia, Austria, enrolled last month for the photo-engraving and three-color courses.

Miss Calla Clark, who took the retouching course last summer, is employed in the Spellman Studio of Detroit.

George Herriman, of 1909, made the college a visit last month. He is employed in an engraving plant in Chicago.

Alfred Lomen of Nome, Alaska, went to Peoria, Illinois, last week to meet Captain Amundsen, discoverer of the South Pole and the Northwest Passage. Mr. Lomen was well acquainted with Captain Amundsen in Alaska.

A new and complete enlarging equipment has been installed in the enlarging department of the college.

Taking Pictures In Cuba

The general impression which one gets of lights and colors in Cuba is always suggestive of what is known as the impressionist style in art. Everywhere are bright colors; the verdure is of the most vivid green, the sea is the brightest crystal blue, the sky is clear and the sun shines with a brightness which no one who has never visited the tropics can imagine. But to give an idea of the intensity of the sunlight, we will relate an experience with photography. We carried during our visit on this occasion a 4x5 Poco camera. In and around Boston, or, rather, New England, we would use the largest, or the next to the largest stop, with exposure according to the light. In the tropics we found that nine times out of ten the

OUR BOOK SHELVES.

pictures would be over-exposed and spoiled if we did not use the smallest stop and speed the exposure up to one five-hundredth or one-thousandth of a second. A gentleman from New York, who had an expensive camera, and who had the stop timed to one-fiftieth of a second, using the smallest stop, lost every picture by over-exposure. Unfortunately, we had a plate camera instead of one carrying films. Wishing to develop some

pictures while in the West Indies, we chose the night as the coolest portion of the twenty-four hours. Now, ice, of course, was not obtainable anywhere, but we procured as cool water as possible in which to wash the plates, but many of the pictures were ruined because the gelatine film slid off the glass, either entirely into the bath or enough so that the film was wrinkled, which also ruined the picture.—*The Cuba Review*.



OUR BOOK SHELVES

"Composition"

The above is the brief and concise title of a handsome and well-printed quarto volume just to hand from the publishers. The author, Arthur W. Dow, is too well known as an art instructor and teacher to make necessary any assurance from us as to his ability, and the fact that the volume before us is the seventh edition makes any assertion of ours as to the value of the work alike superficial. In the book, generous illustrations and masterly text combine to lead the student onward to an appreciation of the harmony on which all good art is based. As the author says, the book has for its object the teaching of art principles, the putting together of lines, masses, and colors correctly so as to form harmony. The effort to produce that which is artistic must result in art to the extent that the appreciation of the worker is developed, and this book certainly can do much to increase one's appreciation. While intended primarily for artists of the brush and pen, all that the book contains is alike applicable to the work of the artist using the lens and sensitive plate as his media. Particularly interesting is the chapter on Principles of Composition, one that will appeal most strongly to the photographer, although Landscape Composition is a well-illustrated chapter that has much to teach the worker along that particular line. The book is published by Doubleday, Page & Company, Garden City, New York. It can also be ordered from Tennant

& Ward, 103 Park Avenue, New York. Price, four dollars net, postage twenty-two cents.

"The Oil and Bromoil Processes"

The enormous spread of pictorial photography has brought into existence many new methods for the production of photographic prints in permanent pigments, and the artist-photographer who wishes to express his ideas rapidly discovers that the limitations of what is known as "straight" photography frequently becomes irksome. The new photographic printing processes known as "oil" and "bromoil" have therefore assumed a position of great importance in modern photography, and as they enable the worker with artistic ideals to produce pictorial results with the greatest amount of ease, they have secured a great measure of popularity.

The standard handbook on these processes, "The Oil and Bromoil Processes," by F. J. Mortimer and S. L. Coulthurst, although only recently published, has already exhausted a first edition, and a second edition is to hand from the publishers. The book contains full and accurate instructions for the production of photographic prints in these attractive processes. It is a book that can be well recommended to every artistic photographer who wishes to turn out the best work. Price, one shilling net. Published by Messrs. Hazell, Watson & Viney, Limited, 52 Long Acre, W. C., London, England.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Dine Employees on Eve of Daughter's Wedding

The large dining room of the Bausch & Lomb Optical Company was the scene of a very pretty event the evening of June twenty-third when Mr. and Mrs. William A. E. Drescher gave an informal supper in honor of their daughter, Miss Hilda Drescher, who was married at their home in Brighton the following evening to Joseph F. Taylor, son of Joseph W. Taylor, general attorney of the company. In addition to the members of the families and their friends, there were present about two hundred and fifty department heads and managers of the company with their wives.

Supper was served at 6:30 o'clock. Moll's Orchestra furnished the music and the menu was interspersed with songs written to suit the occasion. Following the supper, William V. Moore, general agent of the company, acted as master of ceremonies and expressed the felicitations of the employees to Mr. and Mrs. Drescher on the coming event.

In concluding the program, Mr. Drescher responded for the host and hostess, who were enthusiastically cheered. Mr. Taylor, the bridegroom-to-be, brought the program to a close with a few appropriate remarks. Dancing followed until a late hour.—*Rochester Herald.*

Illinois College of Photography

In the class enrolling for July there were several foreign students, as follows: H. H. Boranian, Amassia, Turkey; Mrs. S. A. Headecker, Georgetown, British Guiana; A. S. Nakamura and H. Yonekura, Honolulu, Hawaii, and Mr. Nicholas J. Erbisti, Croatia, Austria.

The annual tennis tournament of the College was held the latter part of last month, and the championship in singles was won by H. J. Fickweiler, of the Engraving College. The doubles were also won by a team from the engravers. The players this year were pretty evenly divided between the engraving

and photography departments and the drawing was arranged so that the two schools should oppose each other in the different matches of the tournament.

Clarence Weed, demonstrator for the Eastman Company, and J. W. Beattie, representing the Cramer Dry Plate Company gave very interesting demonstrations at the College this month.

Thomas Balsness, of Cromwell, Minnesota, left for his home the first of the month, accompanied by his bride, Miss Hazel Smith, of this city. Mr. Balsness took the photography course and will engage in the business somewhere in the Northwest.

Among the visitors at the College last month were Bert L. Green, 1912; Geo. H. Field, 1909; L. Partridge, 1911, and Wallace Christman, 1911.

B. E. Fuqua, of 1912, has returned to the College for review after working the past winter in an engraving plant in Philadelphia.

An Interesting Leaflet

A leaflet entitled "Artificial Light in the Studio" is issued by R. D. Gray, which gives some pertinent points on the use of different kinds of light and the photographic results obtained by them. We are informed that Mr. Gray will mail a copy of the leaflet to all who address him at Ridgewood, New Jersey, Box 391.

Instanto Pleases Amateurs

A large number of our readers have mentioned in their recent letters that they have become "Instanto" users, amateurs who have become interested in this inexpensive developing paper through the remarkable trial offers this company have been making to bring their paper quickly and forcibly to the amateurs' attention. A most convincing and striking set of recommendations could hardly be asked for. They leave little doubt as to "Instanto's" ability to make good. We notice that the manufacturers are using two or three such letters in their advertisement in

NOTES AND COMMENT.

this issue, which will give you some idea as to the opinions others hold on this paper. All are more or less of the same nature and on such evidence we do not hesitate to recommend "Instanto" to our readers' attention. Their special one dollar offer, including two half grosses 4x6 and one-half gross postal cards prepaid, is continued, and they explain their twenty-five-cent offer in this issue's advertisement. Those who have not tried this paper should do so now while it is possible to test it under such liberal conditions. Look up their announcement and order some trial paper.

New Edition "Agfa" Book

The Berlin Aniline Works, 213 Water Street, New York City, American agents for the well-known "Agfa" products, beg to announce the second edition of the "Agfa" Book of Photographic Formulæ. Copies will be ready for distribution the first part of September. They will, as heretofore, be sent only on receipt of an "Agfa" label taken from any of the "Agfa" products, together with ten cents in stamps or coin.

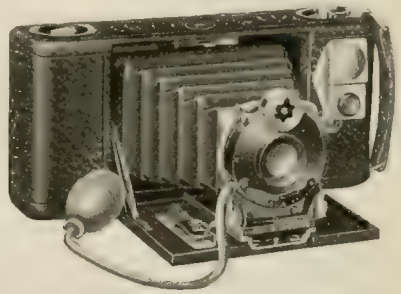
"The Lens that Improves on Acquaintance"

The above is the title of the Verito booklet issued by the Wollensak Optical Company, Rochester, New York. The principal article therein was written by Arthur Hammond, formerly of Boston, now of Nattick, Massachusetts, perhaps the best known author on articles dealing with soft-focus lenses in this country. In addition to this article, there are a number of shorter ones by such well-known photographic artists as Dr. M. D. Miller, Boston; Walter Burke, Sydney, Australia; Albert Kelly, Toronto, Canada; H. Oliver Bodine, Rochester, New York, as well as a great number of short notes on this distinctive objective from artists throughout the world. The illustrations are twelve in number, printed on the finest coated paper, and are reproductions of Verito prints by Messrs. Garo, Towles, Hammond, Weston, Miller, Maerz, Ellis, Rau and others. The balance of the book is made on hand-made Japanese paper printed in two colors and tied with silk. As the edition is limited, each copy costing in the neighborhood of twenty cents, they will not be sent out promiscuously to dealers for distribution, but will be distributed to CAMERA CRAFT readers who

might be enough interested in the Verito soft-focus lenses to send in their request. Address Wollensak Optical Company, Rochester, New York.

The New 1A Ingento

Burke & James, 240-256 East Ontario Street, Chicago, announce that the No. 1A Folding Ingento camera is now ready for the market. This camera takes pictures $2\frac{1}{2} \times 4\frac{1}{4}$, which is one of the most popular of all amateur sizes. The dimensions of the camera are $1\frac{3}{4} \times 3\frac{13}{16} \times 8\frac{3}{8}$. The body is constructed of aluminum covered with levant grain cowhide leather. The trimmings are brass, nickel-plated and polished. It is constructed to open in the horizontal position, an advantage which will be fully appreciated when one considers the fact that probably eighty per cent of amateur pictures are made



in this position. The camera is practically automatic in action, as the lens support, upon being drawn out, clamps automatically to a self-acting extension bed plate, which in turn locks automatically into the focusing device at whatever distance the latter is set. Owing to these automatic arrangements, it requires but a moment to bring the camera into action. One equipment includes a rapid rectilinear lens, speed U. S. 4, while another is supplied with a universal focus achromatic meniscus lens with which all objects at a distance of eight feet or more are in sharp focus. The shutter supplied in both cases is an Ilex Automatic, working for time, bulb and two variable instantaneous speeds. The finder is hooded, brilliant, reversible and dust-proof. There are also two tripod sockets for taking either vertical or horizontal pictures. The price of the camera fitted with rapid rectilinear lens is fifteen dollars. Fitted with achromatic meniscus lens, thirteen dollars and fifty cents. They also supply this camera

fitted with No. 0 Compound shutter and Voigtlander Dynar, f-6 lens, at forty-five dollars.

Illinois College of Photography

Miss Anita Michovsky, daughter of the Danish Consul at Guatemala, Central America, has enrolled for a course in photography at the Bissell Colleges. Miss Michovsky, although quite young, has studied for a number of years in Barcelona, Spain, and Prague, Bohemia, and is an accomplished linguist and musician.

Mr. Hughes, the energetic salesman for Hyatt & Company, of St. Louis, and Wilkie Coss, the genial demonstrator for the Central Dry Plate Company, made business calls at the College last month.

Miss L. A. Rundell, of Buffalo, student of 1905, made a visit to the College last month. Miss Rundell is employed with the King-Weber Supply Company, of Buffalo.

William Thompson, who has been spending the winter in Florida, has returned to finish his course in photography.

We have just received a letter and some very fine prints from Edward H. Weston, of Tropic, California, student of 1908. Mr. Weston has recently won several prizes with his work in various magazine contests.

M. Hongue, who finished his course in photography last month, was robbed of his suit case, diploma and personal effects in Des Moines, Iowa, while en route to take a position.

The Ilex Anastigmat

A frequent visitor to our office, an enthusiastic amateur of several years' experience, recently showed us his latest acquisition, an Ilex anastigmat lens fitted in an Ilex shutter, and he displays it with a great deal of pride and satisfaction. The lens is a three-focus convertible anastigmat, the front or back combination can be used alone, and being of different focal lengths, they give him the choice of three different focal lengths with the one lens. One of the combinations is of quite long focus, being practically a telephoto lens taking the full extension of his camera. The shutter works with a positive wheel arrangement which acts as a retarding device that is unaffected by heat, cold, dust or dampness. We can only agree with him that the equipment is a very desirable one and one that permits of a very wide range

of fine work. Others who are interested in a good equipment at a price that is tempting should write for particulars, addressing Ilex Optical Company, 524 Ilex Circle, Rochester, New York.

Instanto Gaining Popularity

The methods of the Photo Products Company are rather unique. They do not sell through dealers, but direct to the user, claiming that this enables them to offer much better quality at decidedly low prices. Up to comparatively recently they have confined their business to portrait and commercial photographers, but are now in the amateur field, and are bound to make rapid progress. They tell us that out of the first five hundred replies from their original twenty-five-cent offer, already over thirty per cent have placed re-orders, some more than one. From an advertiser's point of view, these are remarkable returns. The address of the Photo Products Company is 6100 La Salle Street, Chicago. Don't forget to mention CAMERA CRAFT when you write.

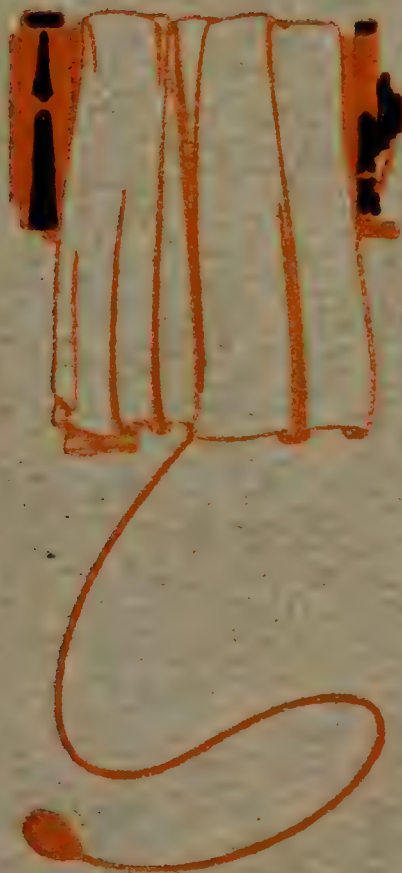
A Noteworthy Enterprise

We have just received from Poulenc Freres, 19 Rue du Quatre-Septembre, Paris, a copy of the descriptive catalogue of their Ninth Annual Exposition. This enterprising firm holds an annual exhibition intended to show, as far as possible, the things that are new in photography, both of French and other manufacture; and, in addition, they are showing a permanent exhibition made up of one hundred and thirty-six examples of the best work of seventy of the best known workers. This last list includes, in addition to the names of the best French workers, the names of Crooke, Demachy, Duhrkoop, Job, Guido Rey, and others. This is a form of enterprise that is most commendable and one that our own dealers who are located in large centers could imitate to the advantage of both their customers and themselves.

Toning

Monsieurs A. and L. Lumiere and Seyewetz have issued a bulletin covering experiments to determine the extent to which platinum replaces silver in toning with this metal. It appears that the replacement by platinum is very much greater than is the case with gold. While gold toning leaves an image that is sixty per cent silver, platinum replaces all but thirty per cent.

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

It's not possible for man to have personal knowledge of all things, and much less, to have all things proven to him.

If any photographer—even previous to going to the Kansas City Convention of the Photographers' Association of America, had been asked to name the best photographic printing medium, his answer would have been

“C Y K O”

WHY? Because the men qualified to make a study of printing mediums rank **CYKO** first, and the leading master photographers use **CYKO**.

For the same reason anyone would name Shakespeare as the greatest English Dramatist, although he might not have read all of Shakespeare's plays to compare them with others.

But those in attendance at the Kansas City Convention have seen the proofs of Cyko superiority submitted by the master photographers.

They have also learned that **CYKO** is more than a paper. It's a printing process—the many-in-one process embracing all photographic effects: Carbon, Platinum, Gum, Gelatino and Collodion-chloride, Matte Albumen, etc.

Tell your friends what you know of your own knowledge and have seen with your own eyes.

A N S C O C O M P A N Y

Binghamton, N. Y.



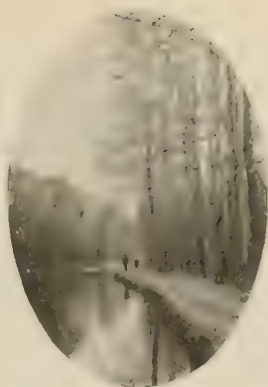
P. A. P. N-W.
CONVENTION PICTURE
By LOTHROP, SEATTLE



CAMERA



CRAFT



A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

VOL. XX

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No. 9

Pointers for Professionals

By Clarence F. Ray



With Illustrations by the Author

MAKING A NORTH LIGHT OUT OF AN EAST OR WEST ONE

I have an east light, single slant, thirteen feet wide by eighteen feet high, and for years it was voted a hoodoo by all who used it. No one had ever been able to work it successfully. They had placed the camera facing the north, having a varying light all day, with a particularly harsh light while the sun shone in the mornings. The operating room is large and wide and by working well back in the room, with camera facing south, and using no curtains on the light except to curtain off a little immediately over sitter's head, I get a lot of north light and it varies but little during the day. By using exceedingly fast plates, I get unusually quick exposures; one-half second and sometimes one-third on well-lighted pictures. By placing children against the west wall with the full volume of my two hundred and thirty-four square feet of light falling upon them, I can snap them in one-tenth or one-fifteenth second with my f-6.8 anastigmat lens wide open. I use an automatic shutter so that I can get the exact exposure needed. Of course, shutter speeds are not absolutely accurate, but if I set mine at one-tenth and it works the same today as it did yesterday, giving me the results I want, I care little if it is not absolutely correct as to time. Let a child smile or fall into a cute pose, snap, it is caught.



PORTRAITS MADE UNDER MY EAST LIGHT

MODERN METHODS IN CHILD PHOTOGRAPHY

I like children and I like to photograph them, especially since it pays well; but if one is not fond of children, he cannot be successful in making good, easy pictures of them. One should make friends with them easily and keep a lot of inexpensive toys for them to play with. I often catch them playing with a small cart, doll or ball; frequently catching them in easy, natural poses while engrossed in simply observing a cart or other toy. Instead of losing my temper and getting angry with restless children, I think only of the money I make by good humor and patience. One can hire a lot of good nature and patience from me at about ten dollars an hour, and I presume I get about that for actual time spent in making exposures. Of course I use lots of plates; but instead of the extra ones being an added expense, they mean larger orders with enough extras for different poses to pay for many more plates than are used. My tank removes the drudgery of developing.

I make a specialty of babies and advertise the fact. It pays to do so, as it is worth big money to any gallery to be known as the best place for pictures of the children. A baby holder must be used for tiny ones, of course, and vignettied white backgrounds give an added dainty effect. I rarely neglect to show the parents a finely colored print, if it is possible to get it ready in time, and they cannot resist it. Those left on my hands, and they are few, make good samples with which to get other orders. Not every one can get good coloring done, nor do it themselves; and, unless it is good, one should have nothing to do with it. I charge one dollar extra for coloring each picture, paying fifty cents to have it well done. Could get ordinary work for fifteen cents, but such work would

POINTERS FOR PROFESSIONALS

soon put me on a level with the man who makes post cards and ping pongs, at least in the matter of price.

PRETTY PICTURES OF WOMEN

If women habitually came to the studio with dresses best suited to picture and with hair arranged in the most becoming manner, the task of making them look pretty in their pictures would be easy. But such is seldom the case.

Having made prize-winning pictures in a beauty contest in which there were twenty thousand contestants, and having several articles of my own writing on "Pretty Pictures of Women" hanging framed in my reception room, they naturally accept quite gracefully my suggestions as to changes in attire or hair. Anyone that really makes good pictures of women must frequently persuade them to make a lot of changes in their costume and hair or else fail to get pictures that will satisfy them. Tell the ladies that a soft,



shapely arrangement of the hair, one running to a point in the center, is usually the best. The high coiffure is more becoming to most faces than the low. Make the hair as wavy as possible and remember that if it is dressed too wide it will make the shoulders look too narrow. If the hair is worn too flat on top, it will make the face appear too broad. Parted in the middle and brushed down plainly, it will cause the face to appear five or ten years older. Any crooked or one-sided arrangement of the hair should be avoided, as it will make the face look unsymmetrical. Light-colored dresses are best suited for photographs. Soft folds of pink, light blue, light green or yellow take best and cause the subject to appear more youthful and prettier. Avoid mannish costumes, plain shirtwaists and dark coats. Athletic costumes are never becoming to women.

Do not make full-length standing pictures unless sitter's skirt hangs unusually well, and even then one must use some artistic skill in arranging the folds in sweeping curves to make it look well, and do not allow your sitters to spoil

your chances of securing a good effect by wearing too many petticoats. Unless the neck be quite long, low-neck effects are more becoming. Never mind the bones, you can easily retouch them away. A woman with a short neck should not wear a collar, as it makes her look squatty. A lady with a very long, thin neck should wear a collar, or at least a necklace, either usually enhancing her looks. Instruct them to wear clothes of the best material obtainable, as the old idea that cheesecloth takes as well as silk is entirely wrong. Persuade them to smile, at least between exposures, as they always look more solemn in their pictures than they intend doing. Request them to leave all friends at home when coming for a sitting, as they only interfere.

It is best to show proofs to a customer yourself and do it when alone with her; her friends often causing trouble. Make appointments, as far as possible, only for bright days and the middle of such days, and your results will increase your business. Tell them to make appointment for sitting whenever possible and allow you ample time in which to do your work well. A hurried manner on the part of the sitter disconcerts the photographer and often results in unsatisfactory pictures. That hurry-



USE SOME ARTISTIC SKILL IN ARRANGING THE FOLDS IN SWEEPING CURVES

ing-to-catch-a-train expression is always bad. Try to put yourself in your customers' place and give them as good treatment as you would like to get were you yourself buying pictures. Get a reputation for fine work, liberal treatment, and make your customers like your methods so well that they will send their friends to you. No need of doing cheap work if you can do this, no matter where you are. People will pay a fair price for what they want, anywhere and everywhere. Remember that you cannot handle cheap trade and fine trade in the same studio without losing a large portion of one or the other, frequently both. Brooms are cheap and any one can afford a neat, clean place. Look carefully to your personal appearance and dress as well as you can, because people get the idea that if a man dresses slovenly and shabbily, his portraits will not look any better. In addition, a prosperous-looking man gets bigger orders and better paying ones. His appearance advertises the fact that he is prosperous and this carries with it the idea that his work is appreciated.



Making Photographs for Publication

By John Chester Powell



With Illustrations by the Author

It is a good practice, while in search of occasional pictures for publication, to keep a record of all subjects found acceptable at the editor's desk, as well as an account of those used and what is received for them. In my book I have all the subjects named and numbered, with letter indicating what paper they were placed with, and the date of publication. I also made a practice of checking these off, as I received the checks, which were credited to my cash and expense account. It is not my purpose to go into detail in consideration of the cash and expense in connection with the work, although this is an important matter, for the simple reason that there is very little satisfaction in doing any work unless the work itself proves sufficiently profitable, at least, to pay one's expenses while doing it.



"DUSK"—Winning a Cash Prize in Competition

CAMERA CRAFT

What is most interesting about such an account is the facts it reveals with reference to one's pictures and one's publishers. In my record, picture No. 1, for instance, was a character portrait of a very interesting person. All I have now is the name in the book, but I remember that it was the first exposure made with my Cycle Poco, $6\frac{1}{2} \times 8\frac{1}{2}$, and that it was a very much over-exposed plate. It developed solid black, and so dense that it required all day in the sun to make a print. Still it was so good that I sold at least a dollar's worth of pictures to the interesting person himself, and it was accepted by a Sunday editor, but never used. Nos. 2 and 3 were views of a new monument and bronze tablet, published immediately on account of news interest. Another was



"HELEN"—Prize Picture in "Buffalo Express" Competition

a lucky shot. I had been at the beach, photographed several groups, but found no good views until, while on the way home, I discovered a commercial photographer operating near a bath house, where a concrete pier extended out into the lake. He had made an effort to get as many people as possible out on the pier, and as he was setting up his camera I also set up mine, some distance farther back, including the photographer in his act with the picture he was taking.

One numbered 26 was a prize winner in a newspaper contest, and so also were others included in those numbered up to 100, along with various views, groups and character studies, of things and persons of local news interest. Then I concluded that it was not necessary to number all subjects, as, of the first one hundred, only thirty-three had been accepted by a publisher. The

MAKING PHOTOGRAPHS FOR PUBLICATION

others were either thrown into the paper barrel or sold to persons privately interested. I then started a new series, No. 16 being a prize winner entitled "A September Gale," while another prize picture, reproduced herewith, was "Dusk." Both of these were simply views illustrating weather conditions.

My work during this time was not in the line of regular commercial or professional photography; that is, I did not go out to solicit orders or sell pictures as a matter of business, although it sometimes kept me busy just supplying the demand. I would make pictures for those who wanted them, but if they did not want them, I went after another kind of pictures, the kind made for the pleasure of making them and the satisfaction of seeing them published. I



"UNCLE TOM"—Character Study, also Prize Winner

had another business, a trade, which kept me rather busy in the spring, but left me with plenty of leisure throughout the rest of the year, and I have found photography about the best thing I ever tried for using up this leisure. Photography kept me busy nights, holidays, and Sundays. In reference to the night work, and the Sundays, I will write other articles; but to make the work easier I bought a Graflex and tried to cut down expenses as well as waste of time by refusing to make anything except news pictures without an order.

My first commission was a mail order from a stationer in a town twenty miles from home. He wanted me to spend a holiday, in May, at his town, and make some views for commercial post cards. I had not tried the Graflex; in fact, I went and got it, with two dozen plates and a film-pack, in order to

CAMERA CRAFT

execute this commission, as I could not get the kind of pictures wanted in any other way. On this trip I photographed everything new I could find in the town, some public buildings, the parade, sports, scenes and scenery, and placed nine pictures with publishers, six being used. A set of these were also published on post cards, and I had mail orders for several hundred photographic cards. These were sold in the store and I supplied them at a wholesale price. Another set of post card subjects and two news pictures were secured on a trip to the county fair. A drive through the country produced several more, and two fall fairs yielded about fifteen good and acceptable subjects.

A railroad wreck produced about five dollars' worth of good pictures, as well as four dollars' worth of special correspondence that made the pictures more interesting. I made, at this time, a special effort to report all news items that I could pick up, at regular space rates, but did not find this work as profitable as my sport with the camera, so I did not keep it up. I continued, though, writing occasional special articles or items when they were required with the pictures.

In starting this review, I intended to explain what kind of pictures are most interesting and acceptable for publication in an illustrated paper. In looking over the list of subjects used, I have concluded that all kinds are included. To explain this is like explaining news. News must tell what is happening, who is doing it, where, how, and when, or at what time it is done. As the papers all have "staff photographers," men who are sent out to illustrate events of the day, it is useless for any one not connected with a paper to rush in any local city pictures; but there is a field outside which the reporters cannot



A HOME ON SQUAW ISLAND—Another Prize Picture

MAKING PHOTOGRAPHS FOR PUBLICATION



A NEWS PICTURE—Bear Trainers were not allowed to enter the city and this picture of them skirting the suburbs had news value

reach. It is in this field, that of the country correspondent, that real news pictures may be found. Things are happening. People are there, unknown outside of their own locality, and a picture will sometimes tell more about them than columns of printed words. If one can find anything interesting in this undiscovered region, inhabited by unknown people who wander around or hide in the rocks and the mountains, the camps, the caves and the dens around a city, there may be news value in the picture.

The most important point is that the subject must make a good picture, and the picture must be of that kind which will make a good reproduction, generally clear and contrasty, without too much fine detail.

Whatever I have tried to do in life, I have tried with all my heart to do well; whatever I have devoted myself to, I have devoted myself to completely; in great aims and in small, I have always been thoroughly in earnest.—DICKENS.





A Few Art Elements Considered

By A. T. De Rome



With Illustrations by Other Workers

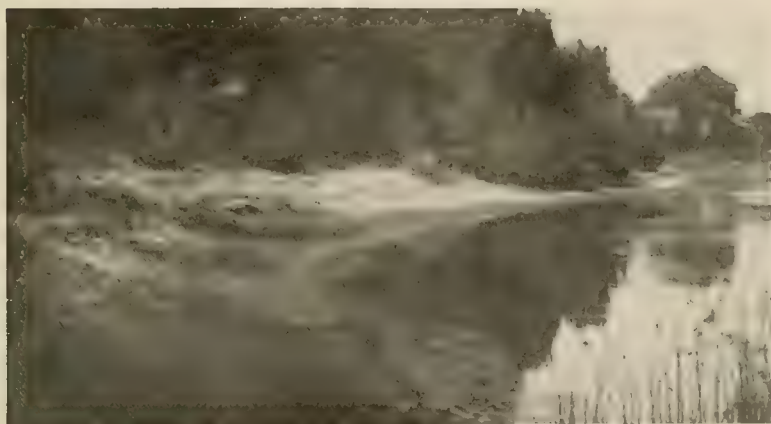
Referring again to our diagram, presented in the opening article of this series, we will next consider the elements of Tone Values, Aerial Perspective, Vibration, Contrast, Motion, Mass, and Line; and, doing so, try to convey an impression of the importance of a strict observance of their principles by the one who is striving to better his work.

After one has made certain that all the features included in his selected view are in harmony with the thought to be expressed, the next most important matter is the correct rendition of those various degrees of light and dark that can be secured, on paper, in portraying the objects making up the picture. When one wishes to express sunlight and joy, he should keep the print light and airy; if he desires to express storm and gloom, he must keep the print dark and heavy. Between these two extremes of light and dark one has it within his power to express every emotion and feeling known in nature.

The idea seems quite prevalent that, to express sunlight, one must have shadows that are jet black in order to make the highlights stand out. This is a mistake. The deepest shade, or color, is never black, for the reason that the stronger the sunlight the weaker are the shadows. The proper course is to hold back the highlights and give the weaker light in the shadows a chance to act, these last being made up of light rays of a different length. It has remained for Mr. Hood, one of our local enthusiasts, to solve, after years of patient effort, this problem for the photographer,—the harmonizing of extreme contrasts of light and shade. Although I have not had the pleasure of talking with Mr. Hood on the subject, the few prints of his of sunlight and distance, that I have seen, made by his method, certainly proclaim him as the man who has done the most of a really practical nature for the artist photographer, in recent years. If the reader missed the article describing his method of obtaining these wonderful results, he should lose no time in securing the May issue of *CAMERA CRAFT* and familiarizing himself therewith.

Funeral music is played entirely in low notes, very closely related; or, in other words, in notes of nearly the same pitch. When one wishes to express gloom pictorially, he selects low-toned colors of about the same hue and degree of darkness throughout. Then, as the subject takes on a more cheerful aspect, a few livelier notes are gradually introduced, finally increasing in variety to the maximum, where the greatest expression of action is secured. Should this lively dashing of color be the representation of a storm, one would, if using only the three tones, black, gray and white, place the white and dark against each other and keep the masses large. On the other hand, to express the action

A FEW ART ELEMENTS CONSIDERED



"AN EXPRESSION OF REST, OF SILENCE"

of joy, the gray should be kept between the black and white, breaking the higher lights up into a greater variety of spots, so doing suggesting the effect of sunlight playing through leaves and falling on dancing figures.

In our first illustration we have an expression of rest, of silence; everything is still and low in tone. No ripple breaks the reflection, no breath of wind bends the reed. Only the dash of sun on the banks saving the whole from a suggestion of complete gloom. This little print is very pleasing because of the harmony existing between its tones and through its being a subject well chosen to express the desired thought. Of its composition we will treat in a future article.

I have chosen the next print to illustrate the meaning and importance of aerial perspective. In it we have an extreme example, there being practically no lines or objects so ranged as to permit the beholder to judge distance from their diminishing size. The difference between linear and aerial perspective being this: The former refers to the apparent gradual diminishing in size of objects as they recede into the distance; the latter term applying to the gradual loss of strength in color, an increasing tendency of both black and white to become gray as the distance becomes greater from the eye. It is this last that explains the suggested feeling that our view is somewhat enveloped in a fog. When everything in the foreground is gray and lacking in contrast, and when distant trees are printed out as black and contrasty as should be foreground objects, there is a feeling that the earth has become a vacuum. If one desires to demonstrate this and get a valuable lesson at the same time, he has but to take a pencil and eraser to any of his prints. He should first take a print and darken a few of the distant objects, afterward using the eraser on any dark foreground object, and finally lighten up or soften all foreground detail. The print will be found to have lost all feeling of depth; distant objects will appear



"AERIAL PERSPECTIVE"

as if near, large trees at a distance as small shrubs close to hand. He should next reserve the procedure, lighten objects in the distance and darken the foreground. So doing immediately produces an appearance of great depth. The degree in which this desirable effect is secured is dependent entirely upon the difference secured between darkness and the amount of detail in the foreground, and the lightness and absence of detail in the distance.

Although the terms vibration and motion may appear to the layman as expressing one and the same thought, the artist must appreciate and distinguish a difference between the two. Vibration, as understood in art, is most easily described as being somewhat a matter of optical illusion; while motion, though its suggestion may be accomplished through an optical illusion, is, more properly speaking, the representation of a force as manifested by the inclination or tendency thereof of the predominating lines and masses. For example, take our third illustration; an excellent suggestion of vibration, the sunlight seeming to stream in a lingering, playful mood among the leaves and branches. In our next illustration the observer is conscious of a certain movement, is more impressed by the apparent direction and force of the wind that causes the inclination of the giant pine. Despite the fact that this important element of the picture leans far to the right in defiance of nature's rule, the picture does not appear unbalanced; this because the photographer, an artist, appreciated the laws of balance as related to composition, and so arranged the elements of his picture that the dark mass of the shore line came in such a position as to support the leaning mass of the tree. The underlying principles of this

"AN EXCELLENT SUGGESTION OF VIBRATION"

matter of balance I fully explained in my article in the June issue. Returning to our third illustration, it is, in addition to being a good example of vibration, worthy of careful study along other lines. Observe, first of all, what a common, every-day subject has been chosen, how bare of thought-creating power are any of the separate parts of which it is composed. Imagine these objects in a flat light, photographed with every detail brought out as the average amateur strives so hard to reproduce the subject before his camera. So

A FEW ART ELEMENTS CONSIDERED



"MOTION . . . MANIFESTED BY THE INCLINATION"

treated, this particular subject would be but an uninteresting study in architecture. Another valuable lesson that this simple print can teach is the great importance of being natural, of getting things in their natural surroundings, of select-

ing and harmonizing subjects and places so that the beholder will feel and know them as being well suited to each other. Then one will have secured some measure of art.

In our next or fifth example is shown the effect of contrast. Here contrast is used for the purpose of concentrating the attention on a certain object, the old white tree. Although there is good contrast between light and dark, there is no vibration as we use the term, simply because the light does not seem to play, but appears to rest. Then again, although sunlight is shown in the picture, it plays a minor part only, attention being more strongly commanded by the peculiar formation of the tree trunk. Were this print in grayer tones throughout, it would better express the thought and feeling of this old tree; there would be mystery in both outline and detail, just as there is in the past memories



"THE EFFECT OF CONTRAST"

In concluding this article, I wish to particularly emphasize this advice: Do not hurry; take plenty of time to study your subjects thoroughly from every angle and aim to express the feeling of the subject by rendering its various lights and darks with due regard for atmosphere and color rather than with a desire to bring out all the mechanical details, details which are better left to the imagination. In other words, make your tones vibrate.

What Is Art?

Probably no word in the English language has been subjected to more meanings and interpretations than "art." Tolstoy, for example, asked himself the question, and wrote three hundred pages in reply. But he failed; the little word was too big for him. Thousands of lesser men have tried to define "art." All have failed. It is no more possible to define art than it is possible to define life. It is like nailing quicksilver to a wall.

But a definition that comes very close to defining it, is that of one Edward Young, a poet of the seventeenth century, who said that "The course of nature is the art of God."

We have been criticised somewhat for occasionally straying off into paths apparently not germane to our title. But there is more to art than painting—or music—or sculpture—or literature. These are but some of the manifestations of art—and the more obvious ones. There is more to art than beauty, in the merely physical sense.

We accept Young's definition. "The course of nature"—that is its field.—
"ART."

How to Look at Pictures

Flaubert says of reading: "Do not read as children read, to be amused, nor as ambitious people read, to get instruction—Read to Live—make an intellectual atmosphere for your soul, which shall be composed of the emanations of all great minds."

So with art, do not look at a picture to be amused, or to be instructed—Look to Enjoy—Arouse the emotional and esthetic nature in your Soul, to be able to grasp and drink in the beauty, poetry and grandeur that inspired the painter.

"Some pictures there are, to which, like certain books, we feel almost drawn, in whose presence we enjoy a peculiar sense of intimacy and well-being. With these, we like to live—To arouse the powers of enjoyment, of abandonment to beauty as an end in itself, is the legitimate aim of art." Again Flaubert writes, "All I ask, is to retain the power of admiring the great masters with that enchanting intimacy, for which I would willingly sacrifice all else."—DORA E. HILLIS.

Thirteenth Annual Convention

(Photographers' Association of the Pacific Northwest)

By J. T. Bertrand



CONVENTION PICTURE, BY AUNE, PORTLAND

Tacoma. In the evening, the photographers were guests at an informal reception given by the Kulshan Club.

The selection of Aberdeen as the next meeting place, the appointment of a special resolutions committee to devise ways and means for the reorganization of the Association along lines that will draw the photographers of the Northwest closer together, and the discussion of city ordinances prohibiting itinerant photographers from doing business without the payment of a substantial license fee, occupied the forenoon business session. Letters were read from the Aberdeen Chamber of Commerce, the Commercial Club of that city, the Portland Commercial Club and the Seattle Chamber of Commerce, indorsing the choice

Owing to the fact that a number of delegates who were delayed on their way and wired asking that such action be taken, the opening of the Annual Convention of the Photographers' Association of the Pacific Northwest was postponed until two o'clock of the opening day. At that hour the Convention was formally opened with the gavel in the hands of President L. A. Sprague, Mayor Cleary, the first speaker, extended, on behalf of the city of Bellingham, a most cordial welcome to the visiting photographers. The response was made by A. L. Jackson, of



CONVENTION PICTURE. By SPRAGUE, BELLINGHAM

of Aberdeen for the 1914 meeting, and unanimous selection was made after W. H. Clintonbeard, of Aberdeen, had extended the invitation to the Convention.

The special committee, which held a short session after the adjournment of the main Convention, was composed of Messrs. Jackson, Pautzke, McCormack, Calder, Clintonbeard and Sprague. President Sprague also appointed a nominating committee composed of Messrs. Jackson, Pautzke, Vincent, Myers, and Mrs. Cheney.

O. W. Pautzke, of Ellensburg, made the opening speech the next morning on the itinerant photographers' ordinance in his city. He stated that he has been severely condemned for having the chief of police enforce it, and if the Convention should decide that an ordinance of that kind is not just, he

would be willing to go before the City Council and have it taken out of the city statute book. A business meeting followed, after which the photographers repaired to the LaRoche studio, where an excellent demonstration of negative-making was given. Among the features of the Convention was the fine exhibit of pictures, practically every photographer present having some speci-

THIRTEENTH ANNUAL CONVENTION P. A. P. N. W.

mens of his work on hand. One of the distinctive exhibits was one belonging to H. C. Wakefield, of Lynden, showing daguerreotypes of Abraham Lincoln and William Seward, an exhibit considered worth thousands of dollars.

The evening session was very interesting, and resulted in a thorough discussion of the plan for reorganization.

At the evening session, W. H. Clintonbeard, of Aberdeen, was unanimously chosen President, and Walter Calder, of Vancouver, British Columbia, was made Vice-President; J. E. Ralston, of Seattle, was re-elected Secretary and Treasurer; Mrs. B. F. Cheney, of South Bend, was elected Vice-President for Washington; D. P. Evans, of Portland, for Oregon; R. B. Hines, of Sandpoint, for Idaho; Roland W. Reeves, of Kalispell, for Montana, and Wilber Gibson, of Victoria, for British Columbia.

One of the important matters decided upon was the establishment of a Board of Control, whose province it will be to organize the territory into smaller districts. This board will act with the Executive Committee, putting out field managers to work in the interests of clubs of photographers, and formulate plans for the assistance of members in good standing. Each club will meet to send delegates to the Association Convention. The board is composed of Messrs. Jackson,



CONVENTION PICTURE. BY GIBSON STUDIO, VICTORIA

Butterworth, Pautzke, Vinson, McCormack, and Sprague. Appropriate resolutions were drafted, declaring Bellingham to be the ideal convention city and extending thanks to the Chamber of Commerce, Mayor Cleary, the Kulshan Club and other organizations which have assisted in welcoming and entertaining the delegates. Resolutions of appreciation of the demonstrations given by representatives of supply dealers, and Mr. LaRoche, for the use of his studios, were also adopted.

The program for the last day included an excursion to the fish traps and a visit to Whatcom Falls Park, where a program of sports had been arranged. Appropriate prizes were offered for each of the events.

One of the talks which was direct and to the point was made by J. E. Ralston, of Seattle. He asserted that many of the photographers were "stuck on themselves" and inclined to view their calling from an artistic standpoint rather than as a commercial venture. He claimed that modern photography was more of a science and the photographers mechanics than it had previously been, and urged the adoption of more modern commercial methods as a remedy for existing unsatisfactory conditions. Other talks were made by W. H. Clintonbeard, J. B. Meyers, J. A. McCormack, A. L. Jackson, and others.

The exhibits of photographic studies that had been arranged in the Chamber of Commerce attracted much attention. Work from some of the largest studios in the country, as well as by local photographers, was shown.



CONVENTION PICTURE, By ROGERS, SEATTLE

HOW THE CLOUDS ARE MADE

A handsome silver loving cup, awarded annually to the outside photographer making the best exhibit was awarded to R. C. Nelson, of Hastings, Nebraska, for some wonderful studies showing the development which has been reached in photography.

To the photographer traveling the longest distance each year to be in attendance at the Convention, this year Mr. Stadden, of Mansfield, Oregon, was awarded a handsome stein set. Mr. Stadden traveled seventy miles by stage before boarding the train which brought him to Bellingham.



How the Clouds are Made

By A. B. Stanley



With Illustrations by the Author

Not the ones we see floating above the horizon when we make an exposure, but the ones we may be able to secure on the plate and are able to retain with proper printing density in the negative if we have the necessary skill. Photographers know how disappointing it is, after composing a beautiful landscape, one crowned by a fine cloud formation that seems, as viewed on the ground glass, to give tone and beauty to the whole scene, to find on developing the plate that these clouds have dissolved into thin air with no possibility of their being made visible in the finished print. The landscape part of the print may be all that was hoped for, but the sky is represented by paper as white as the snow.

A plan that I have followed with much success is that of manipulation in development. I start development in a normal developer and when the sky shows almost sufficient density, which will be in advance of the foreground, I remove the plate from the developer, rinse it in water to remove the developer from the surface of the emulsion, and then, with a tuft of cotton or a camel's-hair brush dipped in developer, go over the foreground portion of the negative, being careful in working up to the skyline, holding the plate so that any excess developer will not flow over any part of the sky.

When the landscape has reached sufficient density by this treatment, I rinse the negative to remove the developer from its surface and pass it on into the fixing bath. Working in this way, on removing the negative from the fixing bath, one will be delighted to find the clouds well defined and a well-balanced degree of density throughout the entire plate. Without this precaution, the more strongly lighted sky will quite often develop so dense that only a blank white sky will appear in the finished print.

CAMERA CRAFT



THE PASSING STORM—4 p. m., July, one twenty-fifth second, f-16, fast plate. Print from Negative Developed in Ordinary Way

There are, of course, numerous writers who have told us how to get clouds with orthochromatic plates, ray filters, specially modified developers, and the like, but this method will secure cloud effects on "any old plate," regardless of speed or emulsion. The illustrations herewith are not particularly interesting or artistic, but they will show what can be done, working as directed.



THE PASSING STORM Same. Duplicate Exposure Developed as Advised

Child Portraiture by Flashlight

By Vinson Saville



With Illustrations by the Author



THE PICTURE BOOK

THE outfit I use consists of a 5x7 Seneca camera, stand, etc., a 5x7 Cooke Anastigmat of eight inches focus, with two cheaper lenses of shorter focus for confined situations. My flash lamp is equipped with a hood to retain the smoke, the powder being fired by the same pressure of the bulb that releases the shutter. Doing most of my work at night, I rigged up two sixty-watt tungsten lamps on a brass plate so that one came on each side of the flash pan and about seven inches in front of it. A drop cord, fitted with a plug, allows these lamps to be connected with any convenient lamp socket. My reflector is a cheap music stand tripod, in which I place a piece of quarter-inch round iron about one and one-half feet long. This has a shoulder so that I can place on top another piece, about four feet long, of one-

eighth inch gas pipe. This pipe has a coupling at the upper end which engages a socket in the middle of a wooden pole about five feet long, and to this pole or roller is tacked a piece of muslin, five feet wide and six feet long. So constructed, the reflector can be taken apart and packed with the flash outfit for easy transportation. A five-cent whistle, such as is filled with water, and a small doll complete my equipment.

I first get everything ready, put the powder in the pan and connect up the two lights with a wall socket, leaving these lights on until after the flash is made. The subject is then posed and focused, the shutter closed and the slide removed. This slide is laid across the front of the camera so as to extend about two-thirds of its length over the lens, the focusing cloth placed over it and the front of the bellows, turned back at the end of the slide, thus forming a hood for the lens. I bought a hood that fitted over the front of the lens.



SIMPLE, EASY POSES ARE FOUND MOST SATISFACTORY

but do not like it as well as this arrangement. I next slip the end of the flash-pan tubing over the nipple in the other end of the shutter bulb and am ready for the exposure, except to look after my lighting, which last is a very simple matter on account of the two tungsten lamps on the flash-pan giving the same lighting as the flash will produce. If I find the lamp is wrongly placed, I move it slowly, watching for the desired effect. For children I use the lamp quite low, about three feet above the head, and close enough to bring the light at an angle of forty-five degrees. With the lamp so close, about three feet, I use about four grains of powder.

Now for the exposure. If the subject is a baby, I get out the whistle and the doll. The former I use to attract attention, a toot on the whistle always doing that. If the baby is nervous, I get some one to use the doll, and when the desired expression is secured I press the bulb. With older children I depend upon talking or the showing of a book that I think will arouse their interest. I have a set of miniature chairs and a table, a purchase from an insolvent ice cream parlor, and these I use very frequently. With ordinary chairs the feet of the small subjects extend out in front in an unfortunate way and the large chairs are out of proportion. With the grown-ups, the flash-pan is put higher and further away, and of course more powder used. The same procedure is followed, the lighting carefully considered, and care taken to see that the subject does not close his eyes. Some of my earlier experiences resulted in closed eyes, but I now avoid this by keeping my hand holding the

CHILD PORTRAITURE BY FLASHLIGHT



THE ADVANTAGE OF SMALL FURNITURE IS APPARENT



THE FLASHLIGHT IS EXCELLENT FOR CHILD PORTRAITURE

CAMERA CRAFT

bulb behind the camera where the sitter cannot anticipate the flash by watching the bulb.

The ceilings of my rooms at home are only nine feet, so that in making standing figures I have to get the lamp very close in order to get a forty-five degree angle, which I find is much less satisfactory than having the light higher and correspondingly further away. Consequently I confine myself to sitting figures where the ceilings are low. After making two flashes I unhook the smoke hood, take it outside and empty the smoke, cleaning the electric globes and returning them at the same time. When there is no electricity in the house I set up the flash lamp where I think it should be, and then, standing in front of it, see if a portion of the cheek on the shadow side of the face can be seen from that position. If it can, I know that the light will be from far enough forward to give good effect. To get the forty-five degree angle in the lighting the lamp must be the same distance away from the sitter that it is higher than the sitter's head, and to get roundness the light should be enough forward of the sitter to reach around and illuminate the cheek on the shadow side. This, of course, depends upon the lighting one is trying to get, but the forty-five degree angle applies in practically all cases and the rule as to lighting the cheek on the shadow side applies in all plain lightings. One can, by examining the shadows, determine just where the lamp should be placed to duplicate any lighting he may see in a picture made by another, just as one can determine the position of the sun in observing the shadows in a landscape picture.

The reflector is used on the side of the sitter opposite the lamp and about the same distance therefrom. It is turned at a slight angle towards the sitter, its position being easily determined if one will but remember that its office is to lighten up the shadows on that side of the face and that the light of the flash is reflected from its surface at the same angle at which it strikes it. In other



SHOWING POSITION OF LAMP, SCREEN, SITTER AND CAMERA, ARRANGED FOR A PORTRAIT

CHILD PORTRAITURE BY FLASHLIGHT



PLAYMATES AND A PICTURE BOOK



THE SISTERS



UNDECIDED
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words, it reflects light just as a mirror reflects an image and it should be placed at such a position and at such an angle that if it were a mirror the sitter would see the image of the flash lamp in it were his eyes turned in that direction.

The illustration herewith, showing arrangement of my portable lamp, reflector, camera and sitter, was made hurriedly, a large doll being used as the subject. While the picture of the subject, as shown at the right, was made with a flash in the usual way, the picture showing the arrangement was made by means of an open flash placed well to the right. The new, improved Luxo flash powder has been used almost exclusively, because its results were gratifying.

I use my lens wide open and try to use just the amount of powder that will give me the first appearance of the highlights in fifteen seconds, using pyro developer according to the Watkins ratio method. When I have twelve or more exposures I use a tank in developing. I have twelve holders, which I keep filled all the time, filling them at night, as I have no dark-room. With children I work fast, as they soon become restless, and I am not afraid of spoiling plates. I study them as to their likes and dislikes, try to interest them, and, lastly, use all the patience I possess.

I take all the best photographic magazines, buy all the annuals, and read all the photographic literature I can get. I have failures, but it is through them that I learn to avoid their repetition. I like photography as a hobby and find no trouble in making it pay for both the time and material that I put into it. I am much interested in Mr. Steadman's articles in *CAMERA CRAFT*, have purchased his book and scale, am learning to count seconds, and will give his method a thorough trial the first time I can get a day off from my regular employment.

Our Education

Life and education are identical because the period to which we traditionally confine the latter term is merely the period of more formal, definite, determined adjustment; yet so long as life lasts and our impressionability and plasticity remain, we are always adapting ourselves to this environment, gaining power like Antaeus of old, each time we touch the Mother Earth from which civilization springs.—NICHOLAS MURRAY BUTLER.

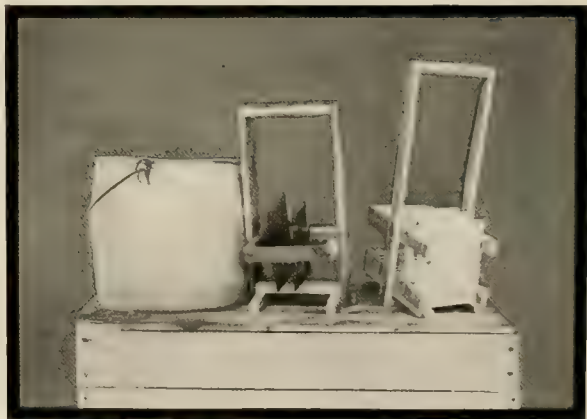


PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

COMBINATION WASHING AND DRYING RACK: I am enclosing herewith a photograph showing a very simple and efficient amateur's home-made washing outfit. The rack on the left is a combination washing and drying rack for glass negatives, one that can be made to hold from six to twelve negatives at one time. To use, it is simply placed in the bucket of water and either raised and lowered or revolved with the hand for about five minutes, the bucket being then refilled with a fresh supply of water. After passing through ten or twelve changes of water, the rack, still carrying the negatives, is placed in a safe place to dry.



The rack on the right is a washing rack for post cards. This will hold about three dozen cards and is handled in the same manner as the negative rack. The cross strings support and prevent the cards from sticking together while in the water. The cards are washed one hour, changing the water every five minutes. The strings are secured by brass shoe tacks and the frame is nailed together with ordinary shingle nails. The pieces are about the size of lath. It is best to have the handles of sufficient height to just slip under the raised handle of the bucket in order to keep cards under water when the operator is engaged at something else. In addition to being very thorough washers, these racks eliminate the disagreeable feature of having one's hands in cold water, which last usually results in a cold.—B. A. Alderson, Illinois.

A CHEAP CARD INDEX AND STUDIO REGISTER: A twenty-cent set of index cards with alphabetical tabs, together with an empty cigar box, made me a good card index system for emergency use. It does not look so well as the regulation article, but as I keep it in a drawer out of sight, that does not

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INDEX.—I simply cut off the stubs of my deposit slip receipts and file them in my improvised card index system. With this file I can instantly get the full history, negative number, etc., of all past customers' orders.—C. F. R. North, Carolina.

TO AVOID STAINS ON DEVELOPING PAPER: Use salt water to rinse prints, between developer and hypo. Use generous quantity of water and common table salt. I use about one heaping tablespoonful to 8x10 tray full of water. Handle prints as little as possible. Do this, and you will find that you will have little or no trouble with those disagreeable brown stains on your prints.—C. H., New Jersey.

DEVELOPMENT: I have had experience with many developers,* but my favorite is pyro, used in a tank. It gives good, crisp negatives, the kind that give the best results on developing paper. Of course, one hears a great deal about the stains that pyro gives, but this is mainly a matter of using a tray. Substituting the tank and, while the negatives may not be as pleasing in appearance, the results, the prints, will be highly satisfactory.—Smallwood, Illinois.

BLUE PRINT PAPER: For the amateur who wants to make his own blue print paper or cloth, I would recommend the following formula:

A: Red prussiate of potash.....	100 grains
Water	1 ounce
B: Citrate of iron and ammonia.....	125 grains
Water	1 ounce

Dissolve each in separate a bottle, using cold water; and for use take equal parts. Coat unruled paper with a small sponge.—Delbert Adams, Oklahoma.

TO JUDGE A NEGATIVE FOR PRINTING: Before trying to print a very thin negative, lock it in the printing frame with a sheet of white paper behind it. One can then see just how much detail is present, something that is impossible by simply looking through the negative or film as is usually done. This will enable the worker to determine just how much he should get in the print and just how little he can expect in bad cases, selecting the grade of paper and developer accordingly. Examining all negatives in this way will often save trying the wrong kind of paper to find that it is not suited.—James Dunlop, California.

COINS AS WEIGHTS: In case the photographer misplaces his regular weights or is so located that a simple, improvised balance is all that is available, he can use coins for weights according to the following table:

Dime	40 grains
Cents	50 grains
Nickel	80 grains
Quarter	100 grains
Half dollar	200 grains
Dollar	100 grains

By adding or subtracting, a great many different weights can be secured with these coins. For example, with a cent placed in one pan of an ordinary balance

PARAGRAPHS PHOTOGRAPHIC

and a dime placed in the other, the addition of sufficient of the desired chemical to the last pan to make the two balance will give ten grains of the chemical. The weights given for the coins are not absolutely exact, but they are near enough so to serve all practical purposes, particularly if the coins are not badly worn.—A. G., New Jersey.

A COPYING PRINT: A great many amateurs do more or less copying of glossy prints by an ordinary window, using the camera and easel on a board or base that cannot be raised or lowered if the reflections are found troublesome. If the worker will resort to the simple expedient of slightly inclining the top of the easel towards the camera and then, by means of the camera swing-back correct the distortion produced, he will generally find that the reflections have been destroyed. This has been my experience; and, as I have never seen this plan in print, it may be of service to some other worker.—T. E. C., Massachusetts.

A GOOD PYRO-METOL FORMULA: As I always find something helpful and good in "Paragraphs Photographic," I offer the three following, which may be new to some. The first is a good pyro-metol developer, without acid, and one that gives a color that many do not. It is made up as follows:

A: Water, warm	20	ounces
Potassium metabisulphite	20	grains
Potassium bromide	10	grains
Metol	$1\frac{1}{2}$	ounce
Pyro	$1\frac{1}{2}$	ounce
B: Water	20	ounces
Sodium sulphite, crystals.....	$1\frac{1}{2}$	ounces
Sodium carbonate	$1\frac{1}{4}$	ounces

Or, for convenience, the sodas may each be mixed with twenty ounces of water: when, of course, an equal amount of both will be required, making double of the A solution and the water added will be slightly less. To use as given above, take one ounce of both A and B stock solution and make up to ten to sixteen ounces with water. The weaker the developer, the more water added, the softer the resultant negatives, and vice versa. Reducing the carbonate will give more color to the negatives.—William Westman, Washington.

CONTRAST DEVELOPER FOR COPYING DRAWINGS, PRINTED MATTER, ETC.: Use slow or "contrast" plates where possible, but if not procurable, shorten exposure in proportion to speed of plate. Develop with a solution made up as follows:

Water	$17\frac{1}{2}$	ounces
Metol	75	grains
Adurol	1	ounce
Sulphite soda, dry.....	13	drachms
Carbonate potassium	35	drachms
Bromide potassium	20	grains

Thoroughly dissolve and filter. Use one-half ounce of above and two and one-half ounces of water, adding ten drops of a ten per cent solution of bromide of

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potassium to this quantity, three ounces. By varying the amount of water and bromide, this makes an excellent lantern slide developer, and one that can be used for general work, snap shots, etc., by those who like black-toned negatives. For example: Use one ounce of the above developer with eight to ten ounces of water for developing the average "snap shot." This is used by some of the largest houses developing for professional and amateur trade. It has been used by them for years and nothing better has been as yet found for all-round worth. It is especially good for copies of drawings, letters for legal purposes, etc.—G. L. Holmes, California.

A SAFE LIGHT FOR WORKING GASLIGHT PAPERS: A good many amateurs who have their developing done by professionals do their own printing, but have no suitable light for working gaslight papers. Nothing helps more in developing and loading the frame than plenty of light, and a good one can be made of the common kitchen lamp by simply taking a sheet (a dozen sheets can be purchased for a few cents) of postoffice paper and fastening the two ends together with a few pins or some paste. This forms a cylinder about six or seven inches in diameter, which, when placed over the lamp, gives a good light and one that I have always found to be safe. If the ends are pinned, the pins may be removed when through for the time and the paper rolled up and put away until again needed. I use this in preference to the orange light in my ruby lamp.—Norman W. Casper, Illinois, I. P. A. 3508.

RETOUCHING DOPE: My second formula is for a retouching medium that will be found excellent. It is compounded as follows:

Red rosin	3 ounces
Turpentine	6 ounces
Sulphuric ether	2 ounces
Beeswax	30 grains

Dissolve the beeswax in the ether and add to the rosin dissolved in the turpentine by means of heat. The bottle should be kept tightly corked when not in use, as the ether and turpentine evaporate quite rapidly.—William Westman, Washington.

A GOOD GROUND-GLASS SUBSTITUTE: My third formula is for a good ground-glass substitute made up as follows:

Sulphuric ether	10 ounces
Touline or tulou.....	5 ounces
Gum Sandarac	500 grains
Gum mastic	120 grains

The addition of a little prussian blue oil color will make this excellent for holding back the shadows when printing.—William Westman, Washington.

A CAUTION: In turning faucets on or off, one must be careful there is no hypo on his hands, as it may be the means of carrying hypo to some solution where it would prove fatal to good results. Hypo will remain on the top and will get on one's hands when it is supposed that they are perfectly free therefrom.—L. N. Searles, South Dakota (I. P. A. No. 3554).



CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

Vol. XX

San Francisco, California, September, 1913

No. 9

Two Competitions

The Oakland Commercial Club has issued a pamphlet in which it announces its intention to "distribute one hundred and fifty dollars in cash prizes for the best photographs of scenes and views in Oakland and Alameda County."

In these days of commercialism, we are all supposed to have a great admiration for the commercial spirit, the ability to get the most for our money from the unsuspecting "other fellow." In the "Rules of Contest" of the Oakland Commercial Club, the pamphlet being headed "1000 Views of Oakland," appear the following words: "All copyrighted pictures must have the copyright waived for all time to the Oakland Commercial Club to be eligible to compete. . . . All pictures entered will become the property of the Oakland Commercial Club."

Obviously, this really means that the Oakland Commercial Club anticipates to get at least one thousand entries of photographs in this competition, all of which are to become its property, copyright, both actual and contingent, included, by the expenditure of the vast sum of one hundred and fifty dollars, which is at the rate of fifteen cents each. The result of this munificence must be, of course, that the photographs have simply poured in upon them. We wonder!!!

The Eastman Kodak Company, supposed to be the finest exemplification of modern commercialism, advertises its 1913 competition, offering three thousand dollars in cash prizes. In its "Terms" appear the following words: "Due and reasonable care will be taken of all non-winning prints and, barring loss or accident, they will be returned to their owners at our expense, . . ." Under the heading of "Suggestions" are the following words: "It is highly probable that we shall want to secure some negatives aside from the prize winners. In such cases, special arrangements will be made."

The Kansas City Convention

The return of several of the Coast attendants at the National Convention just closed, gives us an opportunity to secure first-hand information as to its success. We are sorry to learn that the attendance was not all that was expected and much less than was desired. No blame whatever attaches to the officers, as their work, previous to and during the Convention, has received only the highest praise. The truth of the matter seems to be that the Convention was held in the center of a territory that has never been noted for the interest of its photographers in Convention work. In addition, that enterprising city at

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the mouth of the Kaw has never been noted for its claims as a summer resort, and its justifiable modesty in that direction is fully recognized as being consistent by just the men who should have swelled the attendance, the photographers in the territory immediately surrounding. We trust that the next city to have the Convention, Atlanta, Georgia, will be able to make a better showing by a larger attendance of those men who are located in that section. We have always felt that the Convention should be held in different sections from year to year in order to give a more equitable opportunity to attend, but if it is found that well attended meetings can only be held in the more thickly populated sections, the matter is one that should have consideration. However, we feel every confidence that if San Francisco secures the 1915 Convention, an attendance that for number and enthusiasm will rank equal with the best of the past, will result.

Central Plate Man Here

J. E. O'Neal, special representative of the Central Dry Plate Company of St. Louis, has been in the city for a number of days, looking after the interests of his enterprising firm. Their line has been greatly extended as to variety since the increased facilities of the factory made so doing possible, and Mr. O'Neal reports a decided increase in the interest displayed in the Central plates. He has made a large number of friends while here and is assured a most hearty welcome upon his return.

Why We Are Late

Our last two issues were somewhat late in reaching our readers and the indications are that the present one will be the same. This has been unavoidable owing to a strike in one branch of the printing trade here in this city. We sincerely hope that the difficulty will be adjusted at the earliest possible date so that we can return to our regular publishing date, a date that is necessarily later than that of our Eastern contemporaries owing to the long distance over which we have to handle our extensive advertising business.



A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

A Practical Green Toner for Bromide Prints, A Blue Toner and Two-Color Toning

The following process, by Harry E. Smith, published in the *British Journal of Photography*, is such a decided advance on previously described methods that it is likely to be of great service to bromide printers, especially for enlargements.

At this time of year, when the countryside is radiant with the beauty of spring, many landscape workers will wish to tone their prints green in order to get as near as possible to the brilliant image they saw in the finder. For that alluring vision is, alas! but poorly realized in a black-and-white print, even when the delicate gradations of foliage have been rendered by means of orthochromatic plates and a suitable light filter. Against our better judgment, we are often tempted to expose a plate at this season, though we know full well that the whole charm of the scene will probably be lost in a black-and-white print. A really reliable green toner for bromide prints that keeps well, and has stood the test of time, should therefore be of interest to many.

Of the published formulæ for the green toning of bromide prints, those containing vanadium would seem to be the best, but in my experiments with such mixtures I have found that they left a good deal to be desired. With several there was an undue tendency to stain the highlights, and the half-tones of the print were often attacked. The latter trouble I have put down to the very acid nature of some of the toning solutions that have been recommended, a considerable quantity of strong hydrochloric acid having been required to dissolve the solid vanadium chloride used. As mentioned below, however, vanadium chloride can be obtained of an extremely even standard of composition and purity, and in a form which renders the use of an undesirable amount of hydrochloric acid unnecessary.

A further objection to the best published formulæ that I have seen for vanadium green toning is that they contain oxalic acid, a dangerous poison. While this drawback is doubtless felt most by dealers who are not also pharmaceutical chemists, and thus entitled to retail scheduled poisons, the formula that I give below will certainly not be less acceptable for being free from oxalic acid and oxalates.

The formula that I have worked out is, moreover, not too rapid in its action, and gives tones from a rich olive green—very suitable for some classes of portrait work—to a bright grass green—for middle distances and foregrounds in landscapes.

This solution also lends itself remarkably well to two-color toning with a blue toner, the formula of which is also given. The green toner is used in one solution, but it is advisable to make up two stock solutions, which will remain in perfectly good condition for a year or more. The same remark applies equally to the blue toner. I have some stock solutions of both these toners that were made up about August, 1910. A few days ago these gave perfectly satisfactory results. The bottles had been kept away from the light most of the time, but not for the last three months or so. The green toner formula is as follows:

- No. 1: Potassium ferricyanide..... 2 gms.
Water, distilled100 c.c.s.
- No. 2: Vanadium chloride (Merck's
syrupy) 2 gms.
Iron and ammonium citrate,
green scales 1 gm.
Sodium citrate, neutral..... 25 gms.
Ammonium chloride 2 gms.
Hydrochloric acid strong,
pure 14 c.c.s.
Water, distilled100 c.c.s.
- Ordinary corks may be used for this No. 2

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stock solution, as it does attack them. The solution is a dull mauve-blue color, and it is useful to note this, for, once it has been properly made up, this color indication is a valuable guide on a subsequent occasion. If it turns out green, there is something wrong. An error in weighing out too little sodium citrate, for example, would be shown in this way. The toner should not be green until No. 1 and No. 2 solutions are mixed for use.

For use, dilute one part, in cubic centimeters, minims, or ounces, of No. 1 stock solution with four times its bulk of water. Then, in a separate measure, dilute one part of No. 2 stock solution also with four times its volume of water. Add No. 1 to No. 2, and the toner is ready for use.

Prints should be toned for from four to eight minutes, according to the shade of green required, then washed in five changes of water of two minutes' duration each, and immersed in dilute hydrochloric acid, two per cent strength, for two minutes. After a final wash of fifteen minutes in about seven changes of water they may be hung up to dry.

The prints should be kept moving, or the dish should be rocked, during toning and while the high-lights are being cleared in the dilute acid bath. Washing in running water, instead of in changes of water, is not recommended for green toning by this process.

When the print tones quickly, say, in two or three minutes, as will often happen with gaslight prints and in wide postcards, the clearing bath of dilute hydrochloric acid is not necessary, and its omission in such cases will not affect the permanency of the tint. As a matter of fact, none of my prints has ever faded in the least, although I publish this formula for the first time. I did the experiment, however, just ten years ago, and have since been able to reproduce the color with perfect accuracy.

It is not necessary to keep the plate and the dish covered with a bell jar or paper. I have found that the density tone of the prints is not affected in other ways.

Little with the use of a few drops of the stock solution, and a few drops of the dilute acid, I have been able to produce a very fine, delicate, and permanent green tint, and I have also been able to produce a very fine, delicate, and permanent green tint.

with sodium sulphide. Both the developer used and the brand of paper also seem to affect the duration of toning.

While I have given four to eight minutes as a suitable time for toning, it may be found that ten minutes or even longer will occasionally be necessary if a bright grass-green is desired. In short, the longer the toning, the brighter the green.

As a further guide, if four minutes' toning gives a rich olive green, eight to ten minutes will usually yield a grass-green shade. A fine emerald green usually comes between these limits.

Of course, as with most of these vanadium toners that I have tried, the final color is not definitely seen until the print has been washed; but with the above formula, although the acid clearing bath and final washing produce a change in the tone, this alteration is not nearly so great as with several other formulæ that have been recommended. With the above toner a trial on one or two prints is enough to enable most people to determine easily the time required for a given tone. If, however, the first application of the bath gives too dark a green, it is a simple matter to tone the print again exactly as before, when the brighter shade of green desired should be obtained without any difficulty.

As the making up of a really successful vanadium toner involves a rather delicate equilibrium between the chemicals employed, the following somewhat ample particulars on this point will be found to be not only excusable, but even necessary. Attention given to these working details will make all the difference between a good and an unsatisfactory toner.

Beyond this I shall not attempt to go. With the rapid growth of physical chemistry, a string of equations, even though backed by analyses, are no longer the last word, and, to my mind, are fast becoming a waste of good printing ink in cases of this sort. Unless one has an extremely well equipped laboratory, plenty of time, and a brain-box to match, it seems safest in these days to stick to hard facts alone that one is sure of. If, would, I am certain, that a very clever chemist to prove what succession of changes really take place when such a toner as this acts on the finely divided silver image in a print.

A PHOTOGRAPHIC DIGEST

Such mixtures seem to me akin to some perfumes containing very many ingredients. One knows that if one essential oil is left out the true beauty of the odor is not developed; and analysis alone is still too young a science to probe those mysteries decisively. I can imagine the editor's blue pencil hovering here, and, therefore, fly to working details which involve no theories, but deal purely with facts.

In the first place, it is necessary to keep carefully to the proportions given above, both in making up the stock solutions and in measuring them out for use. This should not be forgotten, because when Solutions 1 and 2 are mixed the green vanadium salt that does the work is kept from precipitation by the sodium citrate; and an undue proportion of either hydrochloric acid or of ammonium chloride would inevitably separate this green compound. This fact necessitated the making up of many trial mixtures, containing varying proportions of at least three of the constituents, even after the empirical formula had been decided on as regards the best chemicals to use. It was by a series of experiments on graded scale strips of bromide paper with such mixtures that I finally settled on the formula given above, which I still consider to be the best for keeping and retaining properties.

The second point, and an important one, is to get the right sort of vanadium chloride. At the risk of giving the makers a free advertisement, it seems advisable for me to state that the chemicals I have used for vanadium are the New solution and the following:

Merck's vanadium and Merck's sodium citrate, neutral, pure. These may be obtained from any chemist. An acid sodium citrate, and the proportions I have given, might easily throw the whole solution out of gear. I strongly recommend the neutral citrate. Merck's vanadium chloride I have found to be equally suitable for this purpose. It is sold out in the form of a concentrated solution of remarkably even composition. The best way with all the bother of dissolving the solid salt, several brands of which I have found to require a lot of strong hydrochloric acid and the aid of heat for complete solution. If the solid chloride is used,

determination of the amount of free hydrochloric acid present after all the vanadium has been got into solution is really necessary for the present purpose, for, even if a great

is taken of the quantity of strong acid added to facilitate solution, one can only guess at the amount that has gone up the flue in fumes.

On the other hand, to eliminate all the free hydrochloric acid by careful evaporation is troublesome, for this would have to be carried out nearly to dryness again, and then it would very likely be found that once more a part of the chloride would not entirely dissolve in water, even on addition of further acid, unless heat were again applied, and then the acid begins to go off afresh. Photographers have enough to try their patience without working in such a vicious circle as that. In fact, solid vanadium chloride is more of a nuisance to make than gold chloride, for, instead of crystallizing out in a reasonable way, it prefers to exist as a green mass, which easily deliquesces. Of course, a vacuum evaporating apparatus on a water bath is the thing in order to get it into both a weighable and entirely soluble state, but not very many dark rooms are provided with this. A concentrated solution of a strength that can be relied on, such as Merck's preparation of vanadium chloride, is, therefore, reliable, since it stays strong and troubleless, and also ensures accuracy. As their chloride is sent out in a rather thick, treacly form, I make first of all for convenience a stock solution of that alone.

Take, for example, one of their one ounce stoppered bottles of vanadium chloride, and invert it over a measure graduated in cubic centimeters until the contents have trickled out. Then dry through the bottle before and after emptying and rinsing out; and so get the actual weight of syrupy vanadium chloride, which I take as a standard as if it were the solid salt. But as these bottles may gradually leak out in places, as mine has done, it is the same amount, this preparation is much more easy, in view of the dilution which is ultimately used.

An ounce of this diluted Merck's vanadium chloride is diluted out into a cubic centimeter measure, twelve cubic centimeters of strong pure hydrochloric acid are added, and distilled water is then poured in to make a total bulk of sixty-two cubic centimeters. This gives for all practical purposes a solution of the chloride, of which one cubic centimeter equals half a gramme of the original thick liquid. It is easy to measure out in this dilution, which

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keeps perfectly. For the two grammes of vanadium chloride given in the No. 2 stock solution, four cubic centimeters of this stock vanadium solution would, of course, be taken.

The hydrochloric acid used should be the pure strong acid, 1.19 S. G. A chemist can always procure this if he has not any in stock. His undiluted acid will probably not be quite up to this strength. To use the yellow spirits of salts of the oil shops would be simply asking for trouble.

Ammonium chloride is usually a very pure salt. The pharmaceutical quality is the right kind to use.

The iron and ammonium citrate should be obtained from a reliable source. Either Merck's or a good English make can easily be procured, but the preparation in *green* scales is what is required. A candle end or a little paraffin wax should be melted over the cork of this bottle, and every time it is opened the wax should be melted afresh on replacing the cork. This salt is deliquescent, and with little provocation may become a nasty, sticky mass, difficult to weigh out, but with the above precaution it should keep perfectly in the loose, scaly state.

In mixing up the No. 2 stock solution, first add the fourteen cubic centimeters of strong hydrochloric acid to the two grammes of vanadium chloride (that is, to the four cubic centimeters of concentrated vanadium chloride stock solution), then dissolve the iron and ammonium citrate, the sodium citrate, and the ammonium chloride in the one hundred cubic centimeters of distilled water, and add the mixture of vanadium chloride and acid to the one hundred cubic centimeters. The mixture is not to be made up to one hundred cubic centimeters, and no heat is required for solution.

In dispensing drugs, the order in which the constituents of a mixture are added is often a matter of the highest importance; and with this No. 2 solution, though it is not a medicament, it is best to proceed always on a regular plan, as noted above, and then there will be no trouble.

Regarding the toning of bromide prints in two colors, green and blue, this gives very beautiful effects in landscape and marine subjects; the foreground and middle-distance in landscapes, and the sea in marine pictures, being tinted green, and the sky afterwards tinted blue with a blue toner. A

formula that I can recommend for a blue toner to be used for this purpose is the following:

No. 1: Potassium ferricyanide 5 gms.
Water, distilled 100 c.c.s.

No. 2 STOCK SOLUTION.

No. 2: Iron and ammonium citrate,
green 5 gms.
Acetic acid, glacial 25 c.c.s.
Water, distilled 70 c.c.s.

For these solutions, also, ordinary corks may be used. With the No. 2 solution dissolve the iron salt in the water and then add the acid.

In mixing up the toner for use, take equal parts of No. 1 and No. 2 solutions, add No. 2 to No. 1, and dilute the mixture with four times its bulk of water. This makes a dark blue solution. After toning for about four minutes, which is usually ample, wash in five changes of water, giving four minutes to each change. Running water is not recommended, for if it is used the blue color of a deep shadow may sometimes spread a little. Both these stock solutions will be found to keep very well indeed if not exposed to bright light for a length of time. In very cold weather there is sometimes a slight tendency on the part of the prussian blue to come down as a precipitate after about five minutes' toning. This may be disregarded. It is generally noticed in solutions that have been kept for a year or more. The slight precipitate does no harm, and, as a matter of fact, toning is usually finished before any tendency for a precipitate to form is noticed.

I can recommend the following method as a practical one for toning bromide prints and enlargements in two colors with the toners above given:

Take the case of a bromide enlargement, for instance. It should be soaked in water for a few minutes, the water poured off, and the dish, with the print lying flat, propped up at an angle, so that the side of the dish makes a convenient trough for the toning solution.

I have found it best to use a small piece of soft sponge, held in an ebonite clip, for applying the toners, keeping separate pieces of sponge for each toner. The pieces will serve over and over again, if well rinsed after being used. The first thing to be done to the wet enlargement is to sponge it over gently to remove surface water. This pre-

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vents the action of the toner from spreading above the horizon. Also roughly sponge the dish dry before starting to tone. Then pour the green toner, diluted ready for use, into the trough formed by the bottom side of the dish, and, dipping the piece of sponge in the solution, pass it gently over and over the surface of the print that needs to be toned green, carefully avoiding the sky, and generally beginning at the bottom, as the foreground is usually required to be a brighter green than the middle-distance. Any part of the print, however, that needs to be toned a lighter green, such as foliage, may receive special attention.

A little patience is required when toning an enlargement in this way, as it naturally takes longer to tone by such a method than it would if all the time covered with the solution in a horizontal dish. Twenty minutes, perhaps, may be taken over it, but the result will well repay the trouble, for, since different parts of the picture can easily be toned dark or light green as required, extremely fine effects are obtainable.

With a toner too rapid in its working there would be a risk of vertical streaky marks caused by the solution running down the print from the sponge when the toner is used for this length of time; but with the formula I have recommended above, working, as it does, at a reasonable speed, I have never had any trouble of this nature.

If some of the green toner should spurt over the sky portion, wash the enlargement under the tap for a minute or two, keeping the dish at an angle, so that the water first strikes the sky where the splashes were, and then runs down over the partially toned green part. Then drain the print, sponge it surface-dry, pour back the toner, and begin the sponge work again. One cannot very well soak in changes of water here, as one does not wish even diluted green toner from the print to get on the sky portion. The delicate blue tone might be degraded. By washing down splashes under the tap as above, however, no harm will be found to have been done by stray portions of green toner when the time comes to tone the sky blue.

When it is judged that the green toning has gone far enough, wash the enlargement under the tap for five minutes, keeping the dish still at an angle, and washing always

from the sky downwards. There is nothing like a rose spray on the tap for this. Then let the print float face up in two changes of water for about two minutes in each change. The dilute hydrochloric is then applied to clear the highlights, a dilution of two per cent strength, two cubic centimeters in one hundred cubic centimeters of water; or, say, two fluid ounces of acid in one hundred ounces of water, being used for two minutes. The print is then washed for ten minutes in five changes of water—that is, about two minutes to each change. During this wash the green tones are seen as they will finally appear. No notice need be taken of the slight change in color while the print is in the acid clearing bath.

At this stage, if all the green tones are not bright enough, toning with the sponge and a fresh portion of green toner should be begun again, as the green portion of the print is best finished off first. If a second application of the green toner is required in this way, it must be remembered that the print should be cleared and washed again, as above, before starting on the sky.

The toning of the sky is a very simple matter, but a larger piece of sponge may well be used, for the process must be carried out quickly. The reason for this is that the blue toner works more rapidly than the green toner, and in this part of the operation, if some care be not taken, vertical streaky marks may be caused by the blue toner running down the print from the sponge. To avoid this, pass the sponge in a horizontal direction backwards and forwards over the whole of the sky in quick successive sweeps.

Three to four minutes is generally enough for the blue toning of the sky. The process of toning the sky blue is, apart from the above, carried out in exactly the same way as the green toning. It does not matter so much here if a splash or two of the blue toner gets on the already green-toned part. A quick rinse under the tap may be given, and no harm is done. Of course, in toning the sky the enlargement is upside down in the dish, which is kept at an angle as before in order to keep the finished part of the print away from the blue toner.

After the sky is toned, it remains only to wash the whole print for twenty minutes in five changes of water—that is, five changes of four minutes each. Then hang to dry.

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If the blue tone of the sky is too heavy, plain water will gradually reduce its intensity and will have practically no effect on the green part; if it is too dull a blue, sponge it over with the two per cent hydrochloric acid clearing bath and wash again. This brightens the blue considerably, but generally gives a color more befitting Italian or Mediterranean skies. The dull blue obtained without the hydrochloric acid is usually more suitable for English landscapes. It will be found that the green color which the sea so often assumes along our coasts can be matched almost exactly by the above toning method; and with a blue sky the most beautiful results are obtainable.

I have always found that, when aiming at the best effects in photography, considerable attention to detail is necessary, and it would have been useless to have given particulars of this process without referring to all the points of difficulty that my own experience has shown may arise—those irritating little obstacles to success which, if not attended to, might possibly spoil a perfect result.

Red Ink as a Blocking-Out Material

While preparations that are absolutely opaque are very useful for masking purposes, the hard, rigid line of demarcation between the blocked-out and the untouched parts of the negative makes them unsuitable for certain other work, such as the removal of too prominent backgrounds, etc. For such tasks, a much softer effect may be obtained, when printing on gaslight or bromide papers, by the use of "Canary Yellow" from a box of Judson's "Photo Tints," while a solution of auramine dye, or of Bismarck brown, in water is also adaptable to the same purpose. For prints on printing-out paper, a few applications of ordinary red ink will be found quite suitable.

The color should be applied in a succession of thin washes, and a little manipulation will permit the softening down of undesirable objects in the background, or even of their entire removal.

Should a sketch effect in the case of a portrait with a plain background be required, the color is painted all over the background, leaving the figure untouched. The result of such an application, when the negative is printed on developing paper, is to give a soft gray background without any detail; while, by applying a succession of washes,

the figure can be made to stand out against a clear white background, as in the illustration above. This portrait was taken in a back yard, but the whole of the surroundings have been eliminated and the vignette effect obtained by washes of red ink on the negative.

In the case of figures in white dresses, a pale wash applied to the face will reduce the tendency for it to print much darker than the dress, and prevents the unpleasant result which such an effect produces.

There are various other uses to which such a light wash of the ink or of a dye, or a succession of such washes, can be put. In a landscape the foreground may print out too far before some distant object shows its full detail, and a light tint applied to the foreground will remedy this. In sea pictures in which there are clouds, an improvement may often be effected by washing over everything in the negative below the sky line. Other instances will no doubt suggest themselves to the reader.—Roland Ewart, in *Photography and Focus*.

Arsenic Toning of Bromides

We agree with Dr. F. Kropf that the intense toxicity of arsenic acid is enough of itself to condemn a toning preparation of which it is the active constituent. But the process which Dr. Kropf mentions in a recent issue of *Photographische Rundschau* is, nevertheless, worthy of record, since it may be possible to modify it by substitution of the arsenic by a less poisonous substance. The toning solution consists of:

Arsenic acid, ten per cent sol.	1 ounce
Potass. bichromate, ten per cent sol.	1 ounce
Citric acid, ten per cent sol.	1 ounce
Water	12 ounces

In this bath, bromide prints attain a sepia-brown tone in from twenty to thirty minutes, the silver image being wholly or partially converted into one of silver arsenide. The function of the bichromate is to hasten the action of the arsenic acid, which it does presumably by first forming a silver chromate more readily susceptible to the arsenic acid than the silver itself. It is possible that the process may be capable of application to other weak acids of elements which form permanent insoluble silver compounds, the metals antimony, bismuth and vanadium being the most promising of these.—*British Journal of Photography*.

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

A Correction

In this department in our July issue was given a formula for a developer for high-speed work; and, in the instructions as to its use, the reader was told to: "immerse in the B solution for one minute, . . . then immerse in solution B for a like period." This should read: immerse in A solution for one minute, and so on, the mistake being in calling the first solution B instead of A.

Litmus Paper

A reader in Oregon asks for some further information regarding litmus paper, his questions being quite numerous. It is advisable to purchase the kind that is sold in a glass tube or bottle, and the unused strips should be kept well corked. The paper is best and most trustworthy when soft and pliable, this being the condition in which the solution to be tested can act upon it most readily. The two kinds, the red and the blue, should be kept separate in different containers, and each used for its own particular work. It is not advisable to use a strip of the blue that has been turned to red by immersing in an acid solution to test further for an alkali reaction. The proper thing being to get a strip of the red litmus paper from its own container.

Farmer's Reducer Too Hard

A reader in Iowa asks if there is any way of making the well-known Farmer's reducer work with less contrasty results; that is, without destroying the shadow detail. Persulphate as a reducer seems to be what he wants, but he finds it too erratic in his hands. C. Wellborne Piper advised, some years ago, that the addition of potassium bromide caused the reducer to work very slowly and steadily without showing any selective action on the shadows. A working solution consists of equal parts of potassium ferricyanide and potassium bromide, both in ten per cent solutions, added in the proportions of a few drops to each two ounces of a fresh, ten per cent solution of hypo. A later writer advised

that ammonia would have the same effect as the potassium bromide, and still another worker recommended using ammonia and the potassium bromide together rather than either alone in the above formula.

Exposure In Telephoto Work

The standard rule, we would advise our Illinois correspondent, is to multiply the exposure that would be given the same scene with the positive lens only, by the square of the magnification secured by the telephoto combination, using the same stop. And in doing this, the worker should keep in mind the narrow angle which the telephoto includes and not estimate the required exposure on a basis of what the positive lens would include in the view. In other words, he should keep well in mind the distance at which the subject of the telephoto exposure is located. When the magnification is but slight, the above rule can be ignored, and instead of multiplying the exposure, the aperture of the positive can be multiplied by the number of magnifications and the result considered as the working aperture of the telephoto, exposure being estimated for the stop figure secured thereby.

An Aid In Focusing

I met a photographer on the street the other day and he asked me to go up to a certain building where he was going to make a few interiors, if I could spare the time. Being interested in seeing just how he would go about making a few of what I knew to be some quite difficult subjects, I went along. Setting up his camera for the first one, a rather dim interior, he focused and changed around a little and then asked me to pass judgment on the selection of the view. I looked at the focusing screen and was surprised at the brilliancy of the image. And I found out how it was done. He made a practice of occasionally giving the ground surface of his focusing screen an application of glycerine, a few drops rubbed about with

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a tuft of cotton. This he followed by a rubbing of clean rag or dry cotton, just enough to almost remove all the glycerine. This last did away with the too transparent effect of the first application, a condition that prevents any image from being apparent. The glycerine being about the slowest drying substance known, the desired effect that follows the final rubbing is preserved for several weeks. The scheme has only one drawback, and that is its tendency to lead one astray in the matter of exposure. If the worker does not clearly bear in mind the fact that the image is much more brilliant than it would be under ordinary circumstances, he is quite likely to be influenced thereby into giving an exposure entirely too short. The user of a reliable exposure meter, and these helps are doubly valuable in interior work, is not so liable to fall into the error mentioned.

Greenish or Brownish Tones

An Oklahoma correspondent writes to ask : to the cause and prevention of greenish and brownish tones in his prints on developing paper. These tones are generally the result of using the developer too long, using it after its power has become somewhat exhausted. Also, the use of too much bromide will produce the same undesirable results, particularly in the matter of greenish tones. The brownish tones may also be caused by a too dilute developer or even by another form of prolonged development, that caused by a too cold developing solution. Any good developer or formula, mixed up fresh and used with just enough bromide to keep the whites clear, will, if the paper is so exposed as to develop in about thirty seconds, give prints having a good and pleasing black tone. Occasionally one will run across a batch of paper that requires so much bromide to keep the whites clear that the greenish tones are bound to be produced. In such a case the worker should substitute, for half of the bromide solution necessary, an equal amount of a ten per cent solution of potassium cyanide. In this way the necessary amount of restrainer can be added to the developer without causing the objectionable green tones. As we have said, if the full amount of bromide is necessary to preserve the whites of old prints, the addition to the developer, green tones will be the result. If enough cyanide solution is added to the developer of the whites follows. However, using a half quantity of

the two achieves the desired result of preserving the purity of the whites, and does it without causing either of the troubles mentioned. The worker must remember that potassium cyanide is a deadly poison, but the small amount that enters into a working developing solution is so small that no ill effect be feared.

The Despised Single Lens

A correspondent in Oregon writes that he has recently been using a single lens for most of his view work, using it with every satisfaction, yet incurring the ridicule of his photographic friends, who express pity at the density which he displays in making so obvious a mistake as using such a lens when he has others much better. He wants to know if he is mistaken to so great an extent; if the good results he secures with the single lens would be so much better if made with a more expensive lens; and what defense he can make for his idiotic preference, supposing of course that any defense is possible. The facts of the matter are that a well-made single lens gives a more brilliant image than does any double combination. The latter, with their greater number of reflecting surfaces, cause a greater or less amount of scattering light over the entire surface of the plate. The only two defects of any moment that can be charged against a single lens when used for view work are, slowness, and a tendency to render straight lines slightly curved near the edge of the plate. The first is of very little moment, as one rarely wants to use a larger stop than the f-11 permissible with the single lens; and as for the second, few views contain straight lines near the edge of the plate. Even allowing this last to maintain, it holds good only when using single lenses of the shortest possible focal length that will cut the plate. Using, for example, a ten-inch single lens on a $3\frac{1}{4} \times 5\frac{1}{2}$ camera, it will be found that this objection no longer holds good and that the lens can be considered as being practically rectilinear. That is, this tendency of the single lens to render straight lines slightly curved near the edge of the plate exists only when such image is near the edge of the field of the lens. With a lens having a somewhat larger field than is necessary to cover the plate, in other words, a rather long focus for the plate, practically none of this lack of rectilinearity is apparent.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

Mrs. Loomis Passes Away

We are pained to receive a letter from a mutual friend advising that Mrs. Lettie M. Loomis, of Summerland, California, passed away at her home in that town on the twentieth of July. Mrs. Loomis, whose articles and pictures have graced our pages on several occasions, was possessed of an exquisitely kind disposition and a most estimable character, and these not only endeared her to her neighbors, friends and relatives, but gave her a wide and beneficial influence among amateur photographers and the lovers of the beautiful throughout a much wider sphere. As her husband is leaving Summerland, he asks our correspondent to advise us that those who may have been upon her exchange list be informed as to the reason for a discontinuation of their correspondence.

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for I. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smythe, 1160 Detroit St., Denver, Colo.

George E. Moulthropé, Director Lantern Slide Division, Bristol, Conn.

Edward B. Cowles, Secretary Lantern Slide Division, 11 Oak St., Bristol, Conn.

NEW MEMBERS.

3689—M. F. White, R. F. D. No. 5, Shaver, Cal. 3¼x5½, 5x7, and 8x10, developing paper, of logging and lumbering views, also mountain scenes in winter; for mountain views winter scenes preferred, also any scenes or views of interest; unmounted prints only, no post cards; first class work in exchange, prints not desired will be promptly returned. Class 1.

3690—Ralph M. Howell, Vivian, S. D. 2¼x4¼ to 8x10 enlargements, developing and printing-out papers, of landscapes, portraits and general including a number of scenes taken the day after the big blizzard in South Dakota; for a general exchange, particularly sepias by all methods. Class 1.

3691—Elmer L. Goodner, Altus, Okla. Class 2.

3692—R. T. Armstrong, 270 Wisconsin St., Kenosha, Wis. Class 2.

3693—Walter J. Simon, R. F. D. No. 3, Sawyer, Wis.

31xH4, developing papers, of scenery, farm views, etc.; for groups, scenery and home portraiture. Class 1.

3694—W. E. Dodge, Hubbard, Iowa.

3¼x5½ and smaller, developing papers, of scenery, rural and local views; for marines, mountain scenery, water and landscapes; prints size of post cards and Vest Pocket Kodak size. Class 1.

3695X—C. F. Hancock, Stuart, Fla.

Scenes and a few marines in glossy or semi-glossy finish; post cards only. Class 1.

RENEWALS.

2032—John Daniels, 73 Bellingham St., Woonsocket, R. I. Class 1.

2090—Albert H. Tolin, 2155 N. Rural St., Indianapolis, Ind. Class 2.

2572—Cedric A. Kilner, 2715 Warren Ave., Chicago, Ill.

Is willing to exchange local views for any good scenes. Class 1.

2979—W. H. Waggoner, Eureka, Ill. Class 3.

3372—George M. Nicholson, Zuni, Virginia.

3¼x5½ and enlargements to 8x10, developing paper, of landscapes and farm scenes treated in a pictorial manner; for any good pictorial subjects and desire to exchange especially with foreign members; I send out good work, and desire only good work in return; post cards or prints. Class 1. This exchange was erroneously numbered 3374 in our July issue.

3394X—George B. Ley, Box 297, Kenmore, Ohio.

Post cards, developing and printing papers, of views, landscapes, farm scenes and a few portraits; for anything of interest. Class 1.

3396—Stark Weatherall, Louisville, Miss.

Post cards of interesting subjects; for the same. Class 1.

3399—Gilbert H. Zavitz, R. F. D. No. 5, St. Thomas, Ont., Canada.

4x5, and 5x7, developing paper, of miscellaneous subjects; for the same; only good work sent and received, prints only. Class 1.

CAMERA CRAFT

CHANGES OF ADDRESS

- 186X—C. J. Christenson, Adrian, Minn.
(Was Glenoda, Minn.)
186—Maurice Windus, 1402 W. Dalton Ave.,
Spokane, Wash.
(Was 1401 W. 22nd Ave.)
185—Tom C. Bonney, Box 617, Aberdeen, S. D.
(Was Faulkton, S. D.)
1849—Richard L. Berger, care E. C. Duberson,
Box 91, May's Landing, N. J.
(Was Philadelphia, Pa.)
1848—Felix Foreman, Jr., Box 63, Woodlake,
Cal.
(Was Lemon Grove, Cal.)

- 1839—Max Gartner, 12 Dayton St., Pasadena,
Cal.
(Was 154 So. Delacey St.)
18343—C. E. Fehlman, Iriga, Camarines, P. I.
(Was Tagbilaran, Bohol, P. I.)
18345—Mrs. Ida L. Cook, 233 Griffith Ave., San
Mateo, Cal.
(Was 45 Poplar Ave.)
18655—Silas W. Giere, Sacred Heart, Minn.
(Was Glenwood, Minn.)
18675—Otis T. Bartels, Lebanon, Ore.
(Was Carlton, Ore.)

DECEASED

- 1817X—Mrs. Lettie M. Loomis, Summerland,
Cal.

CLUB NEWS AND NOTES

California Camera Club

Since the last notice was sent in, the California Camera Club has been steadily "plugging away," as will be shown by the following resume of events: June twenty-fourth, L. J. Stellmann gave an address on Photography for the Press, illustrated with lantern slides. June twenty-seventh was given the regular monthly illustrated lecture by Professor Baumgardt; subject, Napoleon, the Conqueror of the Earth, with one hundred and forty slides. An audience of nearly twelve hundred greatly enjoyed the talk. June twenty-ninth, outing on San Francisco Bay on Captain W. G. Leale's steamer *Caroline*, to various points of interest, including the Panama-Pacific Exposition site. There were about one hundred and fifty in the party. June thirtieth, a social evening in the clubrooms, with ice cream, cake and music. R. A. Murray gave a short talk on The Glacier National Park, showing a splendid set of slides. July ninth, demonstration of the carbon process by L. A. Goetz. July thirteenth, a talk by E. W. Binkley on Posing of Figures under the Skylight, in the club studio, and an impromptu discussion with Dr. Neymann on, Why Is an Exposure Meter? July sixteenth, special excursion to Palm-dale, across the bay at Mission San Jose, Mameda County, where one hundred and twenty-five members and friends enjoyed themselves as the guests of Henry Lachman. July twenty-second, regular monthly illustrated lecture by Professor B. R. Baumgardt; subject, Modern Achievements in Astronomy, with wonderful slides. The audience completely filled the large hall.

August sixth, demonstration of Bromide Enlarging and Sepia Toning at the rooms, by Gus Glixman. August twentieth, a delightful talk on Japanese Art and Culture and Their Relation to Photographic Methods, with illustrations, was delivered in the assembly room by Henry P. Bowie, President of the Japan Society of America. August twenty-second, regular monthly illustrated lecture by Herbert W. Gleason, of Boston, entitled A Ramble in the Rocky Mountains, with slides and panoramas beautifully colored by Mrs. Gleason. The large hall was again filled by an appreciative audience.

The club's excursion to Yosemite was a huge success, the number attending exceeding all previous club outings to the valley. It is proposed to have several personally conducted trips to this wonderland next year. The club is considering the advisability of fostering a practical school of photography in addition to its regular work.—H. E. POEHLMAN, Second Vice-President.

The Cleveland Camera Club

Just as we go to press there comes to hand the announcement of the Midsummer Exhibition of this young and enterprising organization. Some twenty-eight exhibitors have had accepted about five times that number of pictures. The exhibition is being held from July seventeenth to August second and can hardly fail of being a complete success, judging from the enthusiasm which the members display in all their club activities. Copy of their by-laws are also enclosed, thanks to the kindness of the secretary, A. D. Williams, Box 102, Cleveland, Ohio.

NOTES AND COMMENT

**A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest**

Reported by William Wolff

C. A. Nelson, the veteran photographer, is spending a few weeks in this city. He wishes to dispose of his studio in Bakersfield, as he contemplates retiring from active photographic work. Those who are interested in a studio of the kind will do well to look him up and talk the matter over.

Hazel Turner, receptionist for Maxwell & Mudge, of Fresno, spent the month of July in the southern part of the State. It is rumored that she is to marry a wealthy German merchant.

L. and M. Powell, of Hanford, were seen at the National Convention at Kansas City by the writer.

W. Wolff has returned to San Francisco after a two months' tour of all the large Eastern cities in the interest of Probus paint.

The attendance at the National Convention at Kansas City was very small this year. Of the eight hundred and seventy-six in attendance, two hundred and fifty-five were dealers or demonstrators, including the writer.

The Seavey Company, of Chicago, showed something new at the Convention, a tapestry effect background.

The Eastman Kodak Company's display was very fine. It was in charge of smiling Harry Willis and good-natured Hoefle. You should have seen the latter on get-away day. Some worker!

The writer called on Colonel Cooley in Denver. Cooley was formerly with Hartsook and with Bushnell in San Francisco. He now owns a well-appointed studio in this thriving town with the high altitude.

Yes, Goldensky, Doty, Pop Lively and all the other celebrities were at the Convention.

Adolf Cramer showed St. Louis to the writer as only the Cramers can do it.

George Harris, of Harris & Ewing, Washington, D. C., made quite a talk for the National Convention in San Francisco in 1915.

L. D. Hicks, formerly of the Coast, was at Kansas City to procure the 1914 Convention for Atlanta. He won. Hicks is looking fine and wants to be remembered to all friends.

Mr. Goodheart, of the Southern Photo Materials Company, Atlanta, Georgia, was also a booster for the watermelon State.

The Syracuse University Photographic School

The photographic school at Syracuse University will probably, by the end of the year, be housed in a home of its own, as plans are now under consideration for a special building comprising on the ground floor a lecture room, studio, four dark-rooms, plate, lens and shutter testing rooms and the usual offices. On the first floor will be built a portrait and motion-picture studio, 30x60 feet, in which it will be possible to stage any ordinary play.

Professor E. J. Wall, who is in charge of this department, hopes to have installed in the new building a Hurter & Driffield plate-testing machine with its complement, a special photometer, a complete optical bench, these instruments now being on the way. With these he hopes to make the school a reliable testing establishment for lenses, plates and papers. There will also be put in, at the earliest possible date, a shutter-testing machine. A photomicrographic department is to be fitted up and spectrographic work is to be undertaken; the necessary equipment being all on the spot, only want of room preventing its being installed ere now.

The department has received many donations in the form of apparatus. George Eastman has given a complete series of Kodaks, developing tanks, etc.; the Edison Company has donated projecting machines; F. J. Marion, of the Kalem Company, a motion-picture camera and printer; the Ansco Company, two of their printing machines; the Bausch & Lomb Optical Company, a complete set of lens-grinding tools

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and a lens in the various stages of grinding from the raw glass; while the C. P. Goetz American Optical Company has loaned a fine anastigmat lens.

It may save many applicants trouble if it be explained that the course extends over two years and comprises the necessary art and chemical training required to fit any one to qualify either as an expert with the camera, in the laboratory, or the studio. The demand for skilled workers is greater than the supply and already posts are open to those who graduate, not only in connection with the motion-picture, but also in photographic factories. This explanation is necessary, as many seem to think that photography can be learned in two or three months; but it takes longer than this to become an expert motion-picture or studio operator.

The school was only started last January, with Mr. Wall as instructor, but he has now been made professor and the outlook for the future is more than encouraging. Such a school as this, absolutely independent of any manufacturing concern, ought to take its position in the States as the final court of appeal in all photographic matters. It certainly deserves support, not only that of the motion-picture men, but that of photographic manufacturers and the trade generally, since its work will be in the interests of every branch of the photographic art.

Post Card and Button Photo Camera

There is a marked and increasing interest in instantaneous photography, and the rapid and substantial development of this art is clearly evidenced in the remarkable progress of a company that has devoted its entire efforts to the advancement of this branch of photography.

It was a good many years ago that the International Metal and Ferrotypes Company, now at 2223 West Twelfth Street, Chicago, Illinois, perfected its first camera, which did away with dark rooms, plates and films.

While this machine had great merit and hundreds were sold, many of which are still in use all over the country, the International Metal and Ferrotypes Company was not quite satisfied until at last it has perfected a camera entirely of metal, which it is said will take not only photographs and photo buttons, but full size post cards direct, without the use of plates or films.

This camera, called the Diamond post card

gun, is described as a complete photographic studio in itself, and a full-size post card can be taken, developed and finished and delivered to the customer inside of forty-five seconds. Messrs. Habberman and Dimentberg, proprietors of the International Metal and Ferrotypes Company, have been granted basic patents on this camera which protect all essential features.

The maker of this machine declares that the money-making possibilities for the operator of the Diamond post card gun are limited only by his own industry and ability. That the gun is so unique in appearance that wherever the operator sets up his tripod he is immediately surrounded by a crowd and the novelty of having one's picture taken, developed and delivered in one minute makes almost every one who sees the machine in operation an immediate customer.

Ferrotypes and smaller post cards sell for five cents; the regular size post cards and more elaborate button photos sell from ten to twenty-five cents. The manufacturer estimates there is eight cents profit on every dime taken in and that ten to twenty-five dollars clear profit is nothing unusual for the ambitious operator.

At picnics, carnivals and public gatherings of all kinds, as well as at any busy street corner, the Diamond post card gun operator is sure to find good business.

The company has prepared literature in Spanish, English and German for distribution to those interested.—*American Exporter*.

Fitting End to Convention

The most important National Convention in the history of the American Optical Association was brought to a fitting climax at the Hotel Seneca, the evening of July eighteenth, when the Bausch & Lomb Optical Company, of this city, tendered an elaborate banquet to about five hundred delegates, ladies and guests.

The occasion proved to be one of the big features of the week's activities, and made a very strong impression on the visitors as an evidence of Rochester's hospitality. The banquet is an annual event, but in Chicago last year, and in most other cities in which the convention has met in the past, the Association has given the banquet and those attending have been obliged to pay several dollars for their seats. The function here was enthusiastically declared by the guests

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to be the best banquet ever enjoyed by the Association.

In the course of the evening, Mr. Lynn paid a glowing tribute to the memory of the late Captain Henry Lomb and his partner in founding the great local industry, J. J. Bausch, is still the active president of the company. The guests arose in a body and gave Mr. Bausch a Chautauqua salute, which he returned.

Edward Bausch was then called upon to respond for his father and other members of the company. He made some very appropriate remarks of appreciation for the sentiments expressed, and indicated by the gathering and emphasized strongly the heartfelt welcome extended to the visitors by the company.

At the business meeting held in the afternoon, it was unanimously resolved that Secretary E. E. Arrington be instructed to inform the management of the Panama-Pacific Exposition of the opposition of the Association to the granting of an eyeglass concession, and to advise it that, should such a concession be granted, the Association would fight it by a campaign of publicity carried on all over the country.

Before the speechmaking closed, Judge Lynn spoke of Fred A. McGill, who was present as the New York editor of the optical journal, *Review*, the only weekly periodical in the optical field. The judge recalled that Mr. McGill was a Rochester boy who obtained his newspaper training in this city and expressed pleasure at his success in the field of professional journalism.—*Rochester Evening Times*.

Willoughby's New Bargain List

Any of our readers who may be interested in bargains in photographic goods should send for a copy of this new list. Mr. Willoughby's reputation for a square deal insures fair treatment and a consistent living up to his motto of, "The sale is made when the customer is satisfied." In order to avoid any possibility of disappointment, he has decided to list only standard goods of recent make, such cameras and lenses as he may have that do not come under this classification being sold only over the counter at his New York store. His offer to refund seventy-five per cent of the purchase price still holds good and is well worth investigating. Send for a copy of this new list, addressing,

Willoughby, Broadway and Eleventh Streets, New York, N. Y.

A Desirable Utility

We are pleased to be able to call the attention of our readers to an advertisement that appeared in our last issue and again in this, one concerning the Coombs Automatic India Ink Fountain Pen. While primarily intended for the use of pen and ink artists, this pen is of such obvious value to the photographer that we feel quite sure the manufacturers will have no difficulty in disposing of a large number of them to our readers. It is sufficient to say that this pen comes to us highly recommended by some of the foremost pen and ink artists and cartoonists in the country and the manufacturers guarantee it to be absolutely satisfactory in its work of flowing India ink without hesitation, clogging or thickening. We have ourselves used one of these pens and are more than pleased with it: and, as the manufacturers will cheerfully refund the purchase price within ten days if the pen is not perfectly satisfactory, our readers are assured of full value for their money, particularly at the remarkably low introductory price of two dollars, which is being made for the present.

Points of Construction

The double anastigmat Eurynars are of the symmetrical type of construction, and made up of four perfect uncemented glasses. Both combinations are identical, being composed of two thin, uncemented glasses, separated by a small air space of the adjustable variety, which completes the optical correction of the entire system. Moreover, the construction of the Eurynars (unlike the cemented systems composed of six or eight glasses) completely obliterates the loss of light through absorption.

Either combination may be used separately, giving a thoroughly corrected anastigmat, and double the focus of the complete objective. The most beautiful soft and pictorial effects, now so much in vogue, may be obtained by using a single combination separately at full aperture; while, by stopping down very slightly, microscopically sharp definition is secured, qualities so very essential to the landscape artist, the commercial photographer and the tele-photo craftsman. The Eurynars are perfectly corrected for astigmatism, spherical and chromatic aberration and coma.

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They are flat field lenses, free from distortion, of even illumination, and they cut the plate uniformly sharp to the corners.

An inquiry addressed to the sole American agents, W. J. Laflury Company, 305 North Fifth Avenue, Chicago, will bring most interesting printed matter concerning this fine line of lenses.

Wollensak Guessing Contest

The Wollensak Optical Company advises that: "The guessing contest in our booth at the Kansas City Convention of the P. A. of A. was, as you no doubt know, based on a quart fruit jar filled with shutter parts. To the person making the nearest correct guess we gave a choice of the Vitax No. 3, Achromat, Series II, 8x10; and to the person making the second nearest guess, an 8x10 Verite. The correct number of parts in the jar was three hundred and seventy-eight. Two persons estimated correctly; Charles P. Newton, Collinsville, Oklahoma, won the first prize, and H. N. Mettler, Independence, Kansas, the second. The lenses given as prizes will be forwarded to the above mentioned parties without charges of any kind, and we trust that they can use them to advantage in their daily work. Practically every photographer in attendance at the Convention made an estimate and will be making the report of the judges, Messrs. J. A. Noel, editor of *Abel's Photographic* and Frank V. Chambers, editor of *Photography and The Camera*."

A Monument to the "Hoosier Poet"

Our old subscriber and occasional contributor, William A. Bixler, of Anderson, Indiana, has recently sent us a copy of a "Monument" for circulation in the schools of the country. It is a beautiful book, with illustrations and a dedication to the beloved poet, the Hoosier, in which will be found many facts for the education of our children. Bixler, the poet's son, has written the poem, and the book is a beautiful work, with a dedication to the Hoosier, in which will be found many facts for the education of our children. Bixler, the poet's son, has written the poem, and the book is a beautiful work, with a dedication to the Hoosier, in which will be found many facts for the education of our children.

and furnish the Greenfield Art Club with all the copies of this picture needed, and has already painted nearly a hundred of them. Teachers and others interested in this movement to erect a monument of this great American Poet should write the Greenfield Art Club, Greenfield, Indiana, for a copy of the booklet describing the plan.

A Special Telecentric Lens

While the largest size of the Ross Telecentric lens that has been stocked and carried is the seventeen-inch focus, one of the large New York newspapers has just accepted delivery of a twenty-four-inch Telecentric working at f-5.4. The price list quotes this lens at three hundred dollars, and the agents, George Murphy, Incorporated, hope soon to have some prints that will illustrate the great power of this quick lens. As this is one of the largest lenses of its kind ever made, we believe the specifications of interest to those who desire to make large work at high speed, securing large images of distant objects.

Equivalent focus 24 inches
Back focus 12½ inches
Aperture, f-5.4, equal to about... 4⅜ inches
Size of plate covered..... 8x10 inches
Inside diameter of flange..... 4½ inches
Length over all..... 8⅜ inches
Outside diameter of front cell... 4¾ inches

While this large size will not be carried in stock, orders for it can be filled in from five to six weeks by George Murphy, Incorporated, 59 East Ninth Street, New York, who are agents for this country.

The Bissell Colleges' Catalogue

The new catalogue describing the facilities of the Illinois College of Photography and the Bissell College of Photo-Engraving, together with an annual prospectus of both, is a very handsome book that must appeal very strongly to those contemplating the taking up of photography or photo-engraving as a pursuit. It would be useless to try to do the book justice in an attempt to describe the full and comprehensive manner in which it sets forth the information that it contains. It would seem that every possible question the reader might ask has been anticipated. The color work, samples of the teaching the pupils in the engraving class, the various and fine engravings to be made that are quite rare in publications

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intended for gratuitous distribution as is this. Copies will be gladly furnished any of our readers who will make application to the Bissell Colleges, Effingham, Illinois. We would advise sending for a copy of the book at once so as to have a complete list of the advantages offered at hand.

New Chemical List

A copy of the 1913 E. K. Tested Chemical Price List has just reached us, and we cannot consistently refrain from calling the attention of our readers to this unusually complete line. No matter whether you are a mere novice or an advanced amateur, there is a tube or powder correctly prepared for every want. Goods, no matter what, must first have quality; and quality with a sufficient amount of advertising enables the prospective purchaser to feel the assurance that there are good, strong reasons why he should buy that particular brand or style of package. E. K. Tested Chemicals have quality, which is responsible for their ever-increasing demand; they are advertised extensively. You are told in various publications, year in and year out, just what they are, and these facts we believe are good reasons why you should make sure your next chemical purchases bear this mark of identification: "E. K. Tested."

Central Plate Agency

The Wilton Company, 717 Market Street, St. Louis, have been appointed local agents for the Central Dry Plate Company of St. Louis. The firm will carry a line of the best quality plates and use every effort to take the best possible care of customers who may entrust their orders to them. Mr. Wilton advises that several of the best "dry" plates in the city are using the plates with the greatest of satisfaction, and he expects to greatly increase the list of users, not only here, but through out the territory tributary to him. Users of plates will do well to give the Central plates a trial at least.

A New Price List

We are in receipt of a new descriptive price list of Platina and Instanto papers, two brands that are meeting with most gratifying success at the hands of amateurs throughout the country who have given it a trial. The paper is put out by old experienced manufacturers and they are quite successful

in their method of supplying it to their customers direct from their factory prepaid, a method which appeals quite strongly to many photographers, particularly when applied to a product of such good quality as these papers possess. An inquiry addressed to the Photo Products Company, 6100 La Salle Street, Chicago, Illinois, will bring a copy of this descriptive price list, and twenty-five cents or one dollar will bring an accordingly liberal supply of samples as noted in their advertisement in this issue.

The Multi Speed Catalogue

A copy of the Multi Speed Shutter Booklet reached our desk recently and we would again call attention to it as being of absorbing interest to the worker interested in high-speed work. In addition to some very informative text matter, the booklet contains many striking reproductions of photographs taken at very high shutter speeds. A copy can be obtained free upon request by any of our readers who will make application to the Multi Speed Shutter Company, 317-323 East Thirty-fourth Street, New York.

Mr. McGinnis Honored

The State Civil Service Commission has announced the result of the examination for State Immigration Commissioner, which was held March fourth. J. Stanley McGinnis, of Denver, received the highest mark and will receive the appointment.

The appointment to this position is made by the State Board of Immigration, which under the law must appoint the candidate whose name is certified by the Civil Service Commission.

This position was abolished by the Legislature, but Governor Ammons vetoed the bill and the bureau will be supported partly by public and partly by private funds. *Denver Times.*

Bissell College of Photo-Engraving

Fred Locke, student of 1911, was married last month to Miss Frances Loer, of this city. Mr. Locke is foreman of the engraving plant of the Grip Company, of Toronto, Ontario.

Joe Lee, Chinese student in the engraving course in 1905, wrote us last month from Mexico, where he has been working for some time. He wished to return to this country and wrote for a certificate from the college to enable him to do so.

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Prof. C. W. Fisher, of the engraving college, has just returned from a week's trip to his old home in Nebraska.

Roland Ribbe and Howard Leek, students of 1912, were visitors at the college last month. Mr. Ribbe is employed with the Grip Company, of Toronto, Canada, and Mr. Leek has been traveling through the Southern States, representing a Chicago view company.

On August first, the three-color course at the engraving college was advanced in price to two hundred dollars for the life scholarship.

Proper Artificial Lighting

A practical artificial lighting system is one of the best investments a photographer can make.

Flashlight is now conceded to be the best artificial light, as your exposure is instantaneous, and with modern flash powders but very small charges are necessary for portrait work.

For firing the powder, you want a machine which will permit of adjustment of the height and angle of light, and which has a large enough illuminating surface to insure soft lightings. Ask James H. Smith and Sons Company, 3541 Cottage Grove Avenue, Chicago, to tell you about their Victor Studio Flashlight Cabinet.

"Barnet Handbook No. 9"

The above is the title, followed by a subtitle, "An Amateur's Guide to Plates, Roll Films, and the Making of Prints," of a valuable little booklet that J. L. Lewis, 522 Sixth Avenue, New York, will gladly send to any of our readers. While it of course is intended to advertise the Barnet products, for which Mr. Lewis is the agent, it contains a wealth of valuable information and also a most interesting collection of pictures, reproductions of the prize-winning pictures in the last Barnet competition.

As Potash Would Say

My dear Mr. Clute:

This article by Charles F. Rice in the June number of CAMERA CRAFT, entitled, "Little Cameras and Big Cameras," plus that on the Fuzzies, by George L. Holmes, I understand, would be worth all it costs to subscribe to the magazine for a whole year ahead. You must get to print it another poem some time, which I should write my-

self yet, if nobody else wouldn't be wanting to. A poem like that, mit some ginger, mind you, is a good toning bath, y'understand, for fadeless smiles, and gives that permanency for to live long and be happy, which it wouldn't got to need any bromide in that formula, neither, *Gott sei dank*.

I, too, also am another:

July 9th, 1913. GEORGE L. (WATERBURY).

One Way of Doing

Just too late for our last issue we received the following note, which we would gladly have mentioned earlier as a suggestion to other photographers. This brief message, not intended for publication, came from our old friend, J. C. Shinkle, an occasional contributor to our pages, who moved from Missouri to Woodland, California, some years ago. With his note came a clipping from the Woodland papers, reading as follows:

VACATION NOTICE.

On account of vacation, J. C. Shinkle and J. E. Cook will close their photographic studios from July 14th to August 1st.

J. C. SHINKLE,
J. E. COOK.

Mr. Shinkle's letter reads as follows:

Woodland, Cal., July 14th.

"My dear Mr. Clute:

"We are off tonight, Mr. Cook, my competitor here, and myself, for two weeks' vacation, Mr. Cook going to San Francisco, while I will be at 'Shasta Retreat,' and I think will go over to the Coast at some point near there. Will try and send you some nice views when I return; or, come up to Shasta and we will get some views together. Yours, J. C. SHINKLE."

This is the situation that should exist in every town where there are two or more photographers. Friends Shinkle and Cook no doubt find it much more profitable and enjoyable to be on good terms with each other than to be otherwise. There is nothing to be gained by trying to imitate the dog in the manger. True, these two men might combine forces to discourage a third photographer from establishing himself in their town if the business there should hardly warrant still further division, but even this would be better than allowing a new man to come in and completely demoralize the business by taking advantage of an enmity existing between the two older claimants.

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

A GOOD ANSWER FROM A LEADING BRITISH P H O T O G R A P H E R

“**W**HY do you use CYKO?” he was asked by a disgruntled manufacturer of platinum paper.

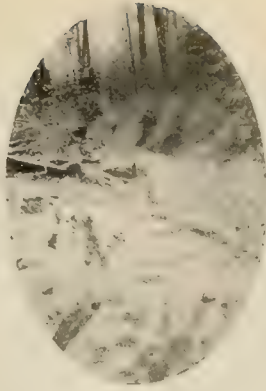
“Why?” he said, “Because no other printing medium will produce those marvelously delicate gradations in the high lights that I love so well, nor the transparent fully detailed shadows, together with that mystic quality “body” (Anglice Guts) which are the very life of a picture.”

ANSCO COMPANY

BINGHAMTON, N. Y.



A PORTRAIT STUDY
By WILLIAM WESTMAN


CAMERA
CRAFT


A PHOTOGRAPHIC MONTHLY**FAYETTE J. CLUTE, Editor and Proprietor****CALL BUILDING****SAN FRANCISCO****CALIFORNIA**

VOL. XX**OCTOBER, 1913****No. 10**

The Beautiful Carbon Print

By Ernest Williams



With Illustrations by the Author

In this article it is my intention to outline only the simplest working details for the successful working of carbon, and I shall not pretend to present anything that is not already well known by those familiar with it. These notes have been principally gathered as the result of several years' experience in connection with pictorial landscape photography, and from the use of the carbon process, and many experiments connected with its use, since I adopted it as the printing medium for my finished work, almost to the exclusion of every other printing medium.

It has always been a source of wonder why a process so capable of rendering beautiful results, and so specially adapted to pictorial requirements, has not been more generally adopted by that class of amateurs who are endeavoring to make pictures by means of the camera—especially so when it is known that the process is so simple. Those who have tried it soon found that it placed an increased power in their hands for obtaining artistic results, and this, if for no other reason, would be sufficient excuse for its adoption.

Though I have been actually interested in making pictures by means of the camera for a number of years, and have used almost every known printing medium, there is no process that I know of in photography that still gives me

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so much pleasure in its working and is so satisfactory in the results obtained. For landscape work, which I have followed almost to the exclusion of all other branches of photography, I have found it pre-eminently adapted, either in rendering the finest detail or broad masses. If I could not have recourse to carbon as a printing medium, I would destroy the greater portion of my negatives, for what pictorial quality the prints may possess, outside of the mere composition, is largely due to that peculiarly rich quality which is inherent in the carbon print. It must be admitted that carbon has a quality of "tone" all its own, and that a pictorial one, not found in any other process; and it is chiefly because of its adaptability for pictorial work that I would urge its adoption. Those who have been confined to the use of development papers and will give carbon a fair trial will find it much easier to obtain artistic results. The reason it lends itself so readily in the improvement of the artistic appearance of pictures lies in the characteristics peculiar to the process, which can be so readily taken advantage of by those familiar with it. In addition to having a wide range of color to choose from, it will be often found that a finished print will possess a pictorial quality that is difficult of duplication, and without which the picture might be counted a failure. I have frequently discovered that a negative which was fairly good in composition and failed to give a satisfactory print in other printing mediums, when printed in carbon from a suitably selected color, would yield a print that was artistically satisfactory. It will also be frequently found that where certain colors will not give a satisfactory print, by experimentation,



WHERE SUNLIGHT STREAMS
152

THE BEAUTIFUL CARBON PRINT



OLD OCEAN IN A GENTLE MOOD

a color will be found exactly suited, and it is often the case that what color may be suited to a given negative can only be determined by experiment. And those who like myself want no more than one or two pictures at most from their negatives will see the great advantage of having so wide a range of colors and shades to select from. Not only do we have this choice of color, but different kinds of transfer papers, with various tints and surfaces, may be prepared with little trouble and expense, and this will further add to the latitude of pictorial expression. Those, of course, who are familiar with the carbon process and know its characteristics, recognize this adaptability; so that once a carbon worker, it is fairly safe to say that one will always be a carbon worker. Those who are anxious to improve their work from the pictorial viewpoint, and have not tried carbon, will find its adoption a decided gain, and its intelligent use will result in better artistic work. Though the process may not be as plastic as gum, it has its advantages, and does not have some of the attendant drawbacks characteristic of gum—such as stickiness, messiness and uncertainty.

The apparatus necessary for working carbon is simple and may consist of a flat squeegee of the scraper kind and a thermometer for testing the temperature of the water in development. This last may, however, be dispensed with later on when the worker becomes familiar with the proper temperature by touch. A piece of rubber sheeting large enough to cover the largest picture intended to be made. This latter may be purchased at most any dry goods store. One large, deep tray for development and another for the sensitizing bath.

The printing materials and chemicals necessary are: Carbon tissue, transfer paper, potassium bichromate, citric acid and a few ounces of stronger ammonia.

Cut sizes of carbon tissue will be found more convenient to handle than in rolls, for tissue in the latter form has a tendency to curl and a "contrariness"

which not only makes it very difficult to handle, but is extremely exasperating. Then, by purchasing in cut sizes, a greater variety of colors may be kept on hand, without the expense of buying a roll of each color desired.

For the sensitizing bath I prefer in my own work a formula given some time ago in *Photo Miniature*. This has given the most uniform satisfaction of any I have tried, and is given here as follows:

Potassium bichromate 1 ounce
Citric acid $\frac{1}{4}$ ounce
Water 50 ounces

The solids are dissolved separately, and when dissolved, stronger ammonia should be added in just sufficient quantity to turn the solution to a lemon yellow

color. Only sufficient to bring it to this point should be added, and therefore should be added gradually. This operation is best carried out in daylight on account of the difficulty in determining the right color by electric or gas light. When using this sensitizing bath, it should be kept as nearly as possible at a temperature of sixty-five degrees. The tissue is immersed in the sensitizing bath for ninety seconds, and any air-bells that may appear upon immersion should be broken up. The sensitized tissue may then be hung up by means of photo clips in a darkened room to dry.

As the tissue when thoroughly dry will curl to such an extent as to be almost unmanageable, and for that reason difficult to adjust on the negative, and sometimes impossible to get in perfect contact, the difficulty may be avoided by removing the tissue from the drying line at the moment it is no longer "tacky" to the touch, and placed between dry blotters under pressure until required for use. This can best be done by examining the two lower corners, which will be observed to be the last parts of the tissue to dry. In damp climates, this difficulty may not be experienced, but in this climate, Southern California, if some means is not taken to check this tendency to curl, the tissue will oftentimes become so badly wrinkled as to be useless to attempt to use it.

For those who prefer to sensitize on the day of printing, the following formula, given by Mr. Oesting some time ago in *CAMERA CRAFT*, will be found



A FOGGY MORNING

THE BEAUTIFUL CARBON PRINT

to give good results, but will require the outlay of a few more chemicals:

Potassium bichromate 1 ounce

Water, hot 8 ounces

When cold, add:

Ammonia, stronger $\frac{1}{2}$ ounce

Mix, then add:

Sulphuric ether 1 ounce

Alcohol 8 ounces

Tissue sensitized with this formula will dry within a very few minutes, so that printing operations may be carried on almost immediately. The method of sensitizing with the last-named formula may be proceeded with by pinning the sheet of tissue by its four corners with thumb tacks to a clean board. For applying the sensitizing solution to a camel's-hair brush is preferable to the "glass with flannel attached" sent out by the Autotype Company with their spirit sensitizer. In my hands, the use of the latter-named instrument was attended with difficulties in the way of streaks and brush marks in the finished pictures. Sufficient solution to sensitize the number of sheets required should be poured into a separate receptacle. The brush is then dipped in this and brushed over the surface of the sheet, first across the whole surface in one direction, and then in the opposite direction. The brushing should be done rapidly, care being taken to blend it thoroughly, using just sufficient solution to cover the surface, but not so much as to cause it to run or drip.



DREARY DAY IN WINTER

Before printing, the negative should have a "safe-edge" around the outside margin. This may be accomplished by cutting out of an opaque piece of paper a square an eighth wide, the exact size of the negative and pasted onto the rebate of the printing frame, the same as "masking" to produce a white margin when using developing papers.

Printing time must be ascertained by means of some sort of a "test," for in carbon the image is not visible during printing. The method I follow in my own work, where I only require one or two prints from a negative, and

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the light is constant, is to take a small piece of fresh solio paper, and the time it takes to produce a light proof will be the printing time for carbon on the negative used. The test, of course, is dependent upon sunlight, and the printing time once ascertained may be marked upon the margin of the negative as a future guide. If one does much printing and the light is changeable, some sort of an actinometer will be necessary. The simplest method perhaps would be to make the test from a negative of approximately the same density as the one being printed from. When the proof has reached the right depth, the carbon tissue will then be known to be printed the right depth also. The action of the light continues to a slight extent after the tissue is removed from the printing frame, and unless one intends developing at once, some allowance should be made for this continuing action of the light.

The next operation is transferring the print to its final support. Sheets of transfer paper should be placed in water to soak. But before doing this, it is sometimes a wise precaution to mark on the back of the transfer paper with a lead pencil, so that no mistake may be made by attempting to transfer to the uncoated side. The coated side can scarcely be determined once the paper has become limp in water. The coated side of the paper usually curls inward, except in the case of heavy papers, and in this case the coated side may be told by examining it close to the light, when it will be found that the coated side will have a peculiar sparkle. In the case of celluloid, this sparkle is not present, but the uncoated side usually has fine, knife-like lines running across it. These can be readily seen by examining it at an angle toward the light.



THE BROOK BY THE BIRCHES

The transfer paper having been placed in a tray of cold water for a few minutes, except in the case of very rough papers, which should be left in the water for a much longer period twenty minutes to half an hour or even longer; a sheet of printed carbon tissue is next placed in the water face downward, and any air-bells that may appear should be removed. As soon as the tissue becomes limp and starts to curl in the opposite way, the face of the tissue is brought in contact with the

THE BEAUTIFUL CARBON PRINT

coated side of the transfer paper, the two being kept under water at the time of this operation, and no foreign substance should be allowed to come between the two. The two in contact are drawn from the water and placed on a sheet of glass, and the squeegee passed lightly over them. The rubber sheeting is then placed on the print and the squeegee applied firmly to remove surplus water and air-bells, working with the squeegee from the center of the print outward. After a few strokes of the squeegee the print with the adhering



AS EVENING CLOSES ON

transfer paper is placed between blotters, and kept under pressure until ready to be developed. In the case of smooth papers and celluloid, development may be proceeded with in ten or fifteen minutes. With rough transfer papers, more time will be necessary to insure perfect contact of the tissue to the transfer paper. Prints, however, should not be left too long under pressure, say for eight or ten hours, or overnight, or they will become insoluble, and it will be almost impossible to strip them, and when developed will be found too dark. To develop, the print is placed in a tray of water heated to a temperature of about one hundred or one hundred and ten degrees. In a few minutes the gelatinous mass should begin to ooze out around the edges, and in a few moments more, stripping may be effected. This is done by taking hold of one corner of the tissue, holding the transfer by the edge under the water with the other hand, and slowly and gently "peeling" the tissue backing off. If it does not start readily, it will be an indication that it has not remained in the

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hot water a sufficient length of time, or that the water is not hot enough, or that it has been overprinted, in which case it should be allowed to remain in the water for a while longer. Once the stripping has begun, it should be proceeded with until the backing is completely removed; for if it should be partly stripped and allowed to remain in that condition for a short time, a streak will be almost sure to show when the print has been fully developed. Over-printed pictures, or pictures with heavy shadows predominating, and portraits on black backgrounds will always be found hard to strip, and hotter water will have to be used, longer soaking required and more force exerted to get the backing off. The stripped print may now be fastened with a photo clip by the edge to a pane of glass, which should be somewhat larger than the print, the end of the clip resting on the edge of the tray, inclining the glass with the print in the tray at an angle, making it more convenient for laving with water in development. The print should then be gently laved with the hot water in the tray until development is complete. For this purpose the most conveniently shaped utensil that I have found is the little paraboloid-shaped tins which come with egg-poachers. For this handy little tool I am indebted to the chickens and the cook. When the print is completely developed, it will be easily ascertained from the fact that the print is cleared up in all its details and no more of the gelatinous mass will be seen to wash away. The print may then be transferred to a five per cent solution alum bath, left for a few minutes, rinsed in clean water and hung up to dry. I have not found, however, with the sensitizing formula I now use, that the alum bath was necessary, so I have simplified my operations by discarding it. The surface of the print being easily abraded, it is desirable to get it to a point of safety as soon as possible, so that as soon as development is complete I rinse the print in a tray of clean water and hang up to dry. Bad results sometimes come from allowing prints to lie flat while drying. In this position they catch dust more easily, and oftentimes shiny, uneven spots will occur.

If the carbon worker has the knack and ability to work carefully, prints with shadows that are too dark may be greatly improved by gently rubbing the tip of the finger over these shadows during development, or when they have reached the stage that will show, they will be too dark when finished. A little experience in this mode of reduction will soon teach the beginner how far the practice may be indulged in without endangering the safety of the print.

As to the comparative printing time for the different tissues, red chalk will require considerably more time than other tissues. For instance, if warm black requires two minutes, red chalk would require three minutes on the same negative. The browns and sepias also require a trifle longer printing time than warm black.

In making up my list of different colored tissues, I have finally settled upon the following colors as being the most satisfactory and furnishing sufficient variety for most subjects: Portrait purple, red chalk, Sepia No. 105, sea green, Italian green, and neutral ink. The latter is a very dark blue and suitable for moonlights, night scenes and similar subjects. Portrait purple is one of the most satisfactory colors I have used, either for portrait or landscape work.

THE BEAUTIFUL CARBON PRINT

It is, however, more of a brown than a purple. Italian green is a dull olive green, and will require a somewhat more contrasty negatives than most of the other colors. The same may be said of red chalk. These two latter colors seem to have a tendency to work flat. Sea green is a brighter green than Italian green and is very suitable for seascapes and some landscape subjects where green foliage predominates, or foliage and water compose the most of the picture.

For final transfer, I have found nothing more satisfactory than celluloid, especially for portraiture, and in addition to having a fine, velvety texture, is almost free from the objectionable gloss common to carbon prints. It also has the advantage of remaining flat when dry, whereas, with most transfer papers, especially if they be of light weight, they will curl badly when dry; and, even though flattened, will not remain so.

It will be a saving in expense for the worker to prepare his own transfer paper. Papers of various tints and surfaces may be bought in large sheets at the paper stock houses, and these may be easily prepared for use by coating with gelatine. Most papers will not require waterproofing before coating, if in the after manipulations they are not allowed to remain in the water any great length of time. Among the different papers that might be suggested are linen-surfaced papers, and papers with light tints—such as orange, buff drawing paper, and light tints of blue and gray. In addition to these, Cyco linen, both white and buff stock, may be fixed out in a hypo bath, thoroughly washed, and carbons transferred to them without any further treatment. These papers will give a very fine linen surface superior to anything I have been able to buy in the raw stock. Also spoiled development paper prints may have the image reduced, washed and used in the same manner; or the back of these spoiled prints may be coated, and the coating on the opposite side will counteract the tendency to curl.

The following formula will work with most papers: Soak two ounces of a good grade of hard gelatine (which may be procured in most drug stores) in fifteen ounces of warm water for two or more hours; then heat in a double boiler until thoroughly dissolved. To this solution while hot should be added, drop by drop, a saturated solution of chrome alum until the gelatine solidifies or jellies; then add sufficient glacial acetic acid to bring it back to fluidity. It is then ready for use. The paper to be coated is cut into convenient sizes and the gelatine applied with a large, stiff paste brush, brushing over the surface thoroughly and vigorously. Very rough papers will require two coatings. This solution of gelatine will keep for some time, and when desired to use again it will only be necessary to warm in a water pan.

In coating papers which contain color and likely to run when wet, sufficient for the desired quantity should be poured into a separate receptacle, and the brush thoroughly cleaned afterwards, that none of the color may be transferred to other papers when used again.

These simple directions for working the carbon process will be sufficient for those who do not care to go into any elaborate outlay; but those who desire further details concerning carbon will find a number of books on the market that cover the subject much more fully.

Breaking Into Photography

By J. E. Colby



With Illustrations by the Author



THAT VERY INTERESTING BABY

HAVING read CAMERA CRAFT very closely for several years with a great and abiding confidence in the articles therein, "Home Portraiture," by David J. Cook, decided me to try photography as a vocation. I rented my farm, my horses, and all the machinery and implements thereon for a year. Then I purchased a real large trunk, packed it with everything the imagination could conceive of as being useful in the world of art, from an old razor for an etching knife to a seven years' pile of CAMERA CRAFT. The collection comprised the accumulation of some twelve years of experimenting. Locked and roped, this little equipment tipped the scales at three hundred and seven pounds.

In one hand I carried my suit case, well stocked with the liquid portion of my chemicals, and in the other hand I carried a portable flashlight, and a six-foot background that I could not bear to leave behind. So equipped, I marched bravely up to the railway ticket window and demanded a fare to D—, a town that I judged was far enough outside my zone of friends so that I might not be handicapped by recognition. On the train I consulted my exposure meter several times and also reread the article by Mr. Cook in the November number two or three times. I wanted to be all ready and sure of my ground.

I finally arrived at my destination and was warmly greeted by the friendly landlady of the principal and only hotel. She and her two sons made me welcome to the little burg of two hundred and seventeen souls. I stayed pretty

BREAKING INTO PHOTOGRAPHY

close to my room for two days, pretending to be very busy with my trunk. Imagining that everybody was watching me, and not knowing how to look "professional," I decided that a trip to the nearest large town, metropolis of western North Dakota, might help. So on pretense of business I took the trip, stayed two days, and returned with spirits again at the top notch. I was determined that I would hesitate no longer. I grabbed the telephone directory as advised by dear old CAMÉRA CRAFT, and carefully made out a list of residents' names. Was interrupted by one of the landlady's sons, who wanted his picture taken, but was so scared at the prospect of actually taking a picture that I refused point blank. I told myself I had decided that *child* portraiture was my calling. However, an excuse seeming necessary, I explained that I was not equipped for that class of work. This close shave sent my temperature down below zero, and just when I was getting along so nicely with the list. I put in another day fumbling about my trunk and reading several more articles on Home Portraiture. Finally my temperature rose to about thirty-two degrees and my spirits also, so I called on my good landlady to go over my list and place an X mark after the name of each party who had not been blessed with a son or a daughter during the last ten years. This she kindly did, while I returned to my room and wrote a bunch of letters reading: "The up-to-date photographer no longer asks his patrons to come to his studio," and so on. These were sealed, addressed and stamped, using the two-cent kind as advised by my trusted source of knowledge. But again my courage failed. I would write the editor and ask him how Steadman, for example, who travels all over



READING ABOUT THE PICTURES



JUST A FEW OF MY RECENT BREAKS

this country and Mexico, making money as he goes, goes about it getting his first subjects in a new town. And while I wrote, those letters quietly sat by my arm in a neat little stack, patiently waiting for the up-to-date photographer to step forth with a firm foot and carry them to the postoffice. But their mute appeal gradually changed to what seemed almost a shout of reproach. My courage rose a little and my nerves became more steady. I slipped out, made my way to the postoffice in a casual manner and quietly deposited my alluring letters in the proper opening. Two days later the sun rose clear and bright; so did I, and my courage also. I started out. I resolved to achieve my ends or know the reason why. Taking my list, I started to make the rounds. All the luck that could possibly be expected was mine. Right here I found that it takes determination as well as a camera and film to make a success of my new profession. I do not care whether I find out how Steadman does or not. Eureka! My luck has changed. I will keep on. My dream will come true, and I WILL become a real PHOTOGRAPHER.

Composition

Composition means literally and simply putting several things together so as to make one thing of them, the nature and goodness of which they all have a share in producing. Thus a musician composes an air by putting notes together in certain relations; a poet composes a poem by putting thoughts and words in pleasing order; and a painter a picture by putting thoughts, forms and colors in pleasing order. Composition understood in this pure sense is the type in the arts of mankind, of the providential governments of the world. Though no one can invent by rule, there are simple laws which it is well to know.—RUSKIN.

Seeing Dollars Through a Lens

By Hal G. Hall



With Illustrations by the Author

EDITOR'S NOTE.—It is believed that the excellent article which follows is one that will be of the greatest interest to a large number of our readers, workers who have no doubt often wondered as to the best possible method of using their cameras and their knowledge of photography prove their worth by the production of some slight income. Mr. Hall can be reached by mail, care RIVERSIDE ENTERPRISE, Riverside, California, and he has kindly offered to try to dispose of any suitable prints sent him (with return postage to enable him to send them back if not thought salable), either making a direct cash offer for such as he may know he can place or else returning any proceeds which he may derive from their sale, less a commission agreed upon.



"THE INTREPID CLIMBER"

OF COURSE we can all see dollars through a lens, or without a lens, perhaps, if we have the dollars in hand. The desirable knack, however, is in seeing dollars that we have not, but can get when we see them. And the dollars are already coined, merely waiting to be spied. Naturally, the first step in prying loose any stray portraits of the Goddess of Liberty that may happen to be lying around in our neighborhood is in the sighting of them.

While in the mountains, I have often found the trail of deer. Hence I knew that there were deer about. But I am no hunter, nor am I particularly lucky. Consequently, I don't know how a deer looks along a rifle barrel, though my camping partner, a real hunter, would go over my trail on the very next day and bring back venison. He knew how to find deer and I did not, though there were as many deer in the mountains for me as for him. But my deer are still in the mountains.

My hunter friend confessed to me later that he had repeatedly come

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away empty handed from the same pier from which sea-fishermen seemed to pull in fish as fast as they could bait their hooks and cast their lines. And I have gone kodaking with ambitious friends who complained of nothing to take pictures of, though I was complimented by kind-hearted individuals on my results from the same excursion.

As to seeing dollars through a lens, I believe that it can be done anywhere. Furthermore, the ability to do this does not depend altogether on the kind of lens with which the sighting is done, though at times an anastigmat will bring a larger field into range than would a cheaper one. But I will not now attempt to discuss the merits or demerits of any particular lens. The best that one can afford is the one (or more) that should be used. The man behind the lens is of much more importance than the lens itself. While good tools are very desirable and well worth the difference in cost above that of cheaper ones, it must not be forgotten that a lens is only a tool after all. I have in mind a certain photograph, taken with a little three-dollar Brownie. From the dollar standpoint, this little picture is far better than any taken by the entire battery of more costly instruments that were trained on the subject at the same time. In this case, merely a slight difference of viewpoint made the difference between ordinary snapshots of no particular interest, except to the photographers themselves, and a good salable print that more than paid for the photographer's entire inexpensive outfit. In this case, the discretion of the photographer in selecting a viewpoint, one showing the top of a neighboring building, resulted in a photograph that gives an adequate idea of the intrepid climber's height on the vertical wall. Height of the climber on the wall is the one factor that sets this picture, used above as an initial, aside from the commonplace snapshot, of no interest except to those directly concerned. Any one who sees this picture will probably take a second look at it, and furthermore, be sufficiently interested to read a description of the feat it depicts, were the description to accompany the illustration. As this article particularly considers the requirements of photographs intended for publication, references to the accompanying illustrations are made in that light. Incidentally, to drag in the vertical pronoun, I know that the accompanying illustrations are salable, for I have sold them all one or more times before sandwiching them into the present account.

But to return to the point, it is the *idea* that sells a picture for publication. And by seeing dollars through a lens I mean the seeing of the idea that makes a photograph salable. Conversely, it is just as important to see and recognize the unsalable. It should be borne in mind that with few exceptions mere prettiness does not sell pictures for publication, no matter how desirable beauty may be in personal photographs, salon pictures, albums, and even the ubiquitous post card. Of course, artistic quality in no way detracts from an otherwise salable print. But on the other hand, a merely beautiful picture has little chance in competition with even a decidedly unpicturesque photograph showing a novel or interesting subject. To crib from the patent medicine advertisements of the not distant past, "Every picture *must* tell a story." Or, if the picture itself does not tell a story, it must at least have the essentials upon which a story can be built. According to this criterion, how many "general views," regardless of how picturesque they may be, but are sadly lacking?

SEEING DOLLARS THROUGH A LENS



"NO EXCUSE FOR CUTTING CORNERS"

But on the other hand, many good cameraists daily pass by good material having the basis of a "story." By this it is not meant that every one with a camera can garner in fabulous sums from pictures of things with a story, but with a nominal amount of practice in seeing dollars through the lens a goodly number of photographers could see at least a few of the elusive silver discs that they have persistently overlooked day by day, or perhaps for years. When once sighted, however, the fleeting dollars should be captured at once, whether in sections or in flocks. One cannot exactly estimate the catch until it is made, but by delay a whole drove may be permitted to take wings, never to return. Of this, I know whereof I speak, for on one or two occasions, which I hope not to repeat, I have allowed a considerable flock of the little silver eagles to fly from my grasp, thanks to procrastination. And this, after I had seen them through the lens.

The city fathers of my very own home town decreed that large white spots be painted in the centers of the principal street corners, that no man might have excuse for cutting corners. This was a novel and ingenious idea that made easy the way of the law-abiding driver who was well content to the right of the road in the interest of safety to himself and to others who might have occasion to cross the same crossing at the same time. The spots likewise made it quite simple for traffic officers in disciplining careless drivers and "road hogs." Altogether, the idea of the spots was an innovation, and a good one, as it soon proved. I saw dollars through the lens. But I was busy, the spots would be there, and I would be there for some time, I thought. What was the need of haste, when I could more conveniently wait and capture the silver birds on the spot at my leisure? I considered the dollars that I had seen through the lens as good as captured. But it was not so, though it should have been. Another camera-hunter from another and spotless town entered my

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preserve, saw the dollars through his lens, and sent several of the silver birds to market. True, I did bag a few of them after all, but most of them were irretrievably gone. Such is the danger of procrastination in bagging the elusive dollar, once it has been seen through the lens.

Again, a good "pot hunter" with the camera may not be able to properly prepare his game for market, in which case the hunter had best place his catch with a marketer, without unnecessary delay. Quite often it happens that a photographer gets salable pictures, but, being unable to express the ideas that must accompany them, he is unable to bag the dollars after he has seen them clearly through the lens. Many photographs, in themselves worthless for purposes of publication, would find a ready market if accompanied by an appropriate caption of a few hundred words, or perhaps a short story. However, unfortunately, many photographers cannot clothe their picture-children in the fabric of ideas that would make them presentable. Clothing may not make the man, but it is certain that pictures with scant or poorly arranged clothing of ideas are seldom cordially received by publishers. I have adopted photographic waifs whose guardians never imagined they would wear clothes. Yet, dressed in becoming text, these naked waifs proved to be very presentable little creatures. There are no child-labor laws that forbid your having your naked photographic brain-children dressed up in garments of words and put to profitable work.

And, in most cases, like other workers, your little picture-children do not need to be particularly pretty to be effective for publication. It is quite evident that none of the accompanying illustrations have any great amount of artistic quality, their sole function being to represent some particular idea. And most of these prints involved no photographic problems aside from the quite simple matter of selecting the viewpoint. The only hand work was a slight amount of spotting on the motorcyclist and the concrete studio. At the risk of redundancy, I would repeat that it is the idea that counts. It is by no means improbable that you yourself have on hand a number of pictures suitable for publication, though it did not occur to you at the time of making the exposures. In looking



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LONG BEACH CATASTROPHY

SEEING DOLLARS THROUGH A LENS



"A CONCRETE LAMP-POST"



"CONCRETE STUDIO AND DISPLAY CASE"

over your work, look for the idea, and if any pictures represent an idea, don't allow your "roses to blush unseen," as the poet has put it. The question of what idea is indefinable, and the number of ideas, infinite; but that does not limit the field of him who would see dollars through the lens—quite the contrary. Perhaps the one undeniable general statement that can be applied to a print suitable for reproduction is, the print illustrates an idea.

And there are a multitude of publications, awaiting as many different kinds of ideas, with pictures that really illustrate them. Among these ideas, as among jokes, newness is no handicap, but quite rare. In fact, novelty, if bona fide, as it seldom is, commands a premium. It does not pay to emulate a certain timorous person I call to mind, who doomed a very remarkable photograph to obscurity merely because he "had never seen anything like that in print."

On the other hand, do not suppose an illustration of an idea unsalable because the same idea has been illustrated before. Many times have the same ideas been illustrated again and again in different ways. If you have or can get a really different illustration, there is probably a place for it. Or again, though the picture be not so very different, it might very easily find a market as an illustration of a not particularly novel fact, presented in a new way. I have used many such pictures, pictures that the makers did not suppose adaptable for publication purposes at all. In themselves, the pictures were not of par-

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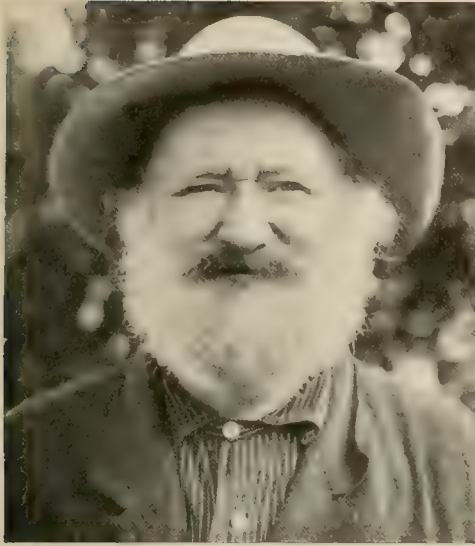
icular interest, belonging to a roughly defined class suitable for purposes of illustration only. In distinction from this class of pictures are those that themselves "tell a story," the written expression of the idea being to a considerable extent incidental.

The accompanying picture of a concrete lamp-post is an example of photographs useful for purpose of illustration only. The idea consisted of an economical method of constructing permanent, artistic, concrete light standards for a park. The picture of the post would have been worthless, except as it illustrated this idea in a cement publication. In the same manner, the picture of the concrete studio and display case illustrates the present tendency toward residence portraiture in combination with modern concrete construction. The flashlight pictures of the motorcyclist, the orange trees and the "smudge pots" illustrate the idea by which many Southern California orange growers protected their crops with a corps of motorcycle scouts. These pictures were specially taken to illustrate the idea of taking the temperature in the orange groves, racing to headquarters to report the temperatures, and lighting the "smudge pots" before the arrival of Jack Frost. The first photograph of the Long Beach Auditorium disaster was used in a building publication to illustrate a structural particular, while the other was printed in a news page where the description was incidental though none the less necessary. However, the news aspect of photographs constitutes a field in itself and can be no more than touched upon in this already diffuse account. Suffice it to say that not a single unnecessary minute should be lost in getting a real news picture into the office of the proper publisher. The news of today will be history to-morrow, and the historian's demand for photographs is necessarily very limited



"THE FLASH-LIGHT PICTURES"

SEEING DOLLARS THROUGH A LENS



MR. TOOCH MARTIN



MR. BRYAN'S DOUBLE

Photographs of the old gentleman with the whiskers had a news value when this eccentric person announced his intention to part with his facial adornment at the time of President Wilson's inauguration. By some chance the old fellow bore, after the elimination of the beard, a striking resemblance to William Jennings Bryan. The pictures in each case represent a peculiarity of the subject, and the "story" follows rather incidentally. However, the value of the pictures would have been less, perhaps, but for the mention of the fact that the beard represented an uninterrupted growth of a quarter century, and that Tooch Martin was an ardent admirer of his "double," the present Secretary of State. The picture of the small building under the trees, while not a particularly striking example of the picturesque, is unique in that it represents an architect's idea of making a transformer house to harmonize with a dwelling. Of course, the picture would be worthless for publication without at least a short explanation of the idea. In this case, as in that of the road sign, the "story" is to a certain extent incidental. The idea of the sign lay in the somewhat unusual procedure of "requesting" motorists to go slow in compliance with the law, in contrast with the usual procedure of threatening heavy fines and imprisonment. Perhaps the foregoing group of pictures will give some idea of the requirements of photographs for publication, though the list might be extended indefinitely. But I would repeat that though it may be worth while, mere technical excellence will never "put over" a photograph. The illustrations with this article were made with almost as many different kinds of cameras, and most of them could have been obtained with very inexpensive outfits in the right hands.

As to the question of the best finish for prints, it hardly need be said that glossy paper should always be used. Within a wide range, almost any size will answer the purpose in the case of prints intended for reproduction, as an engraver can vary the size at will in the process of making a cut. However,



A TRANSFORMER HOUSE

A "REQUESTING" ROAD SIGN

if the surface of the print is not of perfectly smooth finish, a print will make a better reduction than otherwise. But large prints are awkward to prepare for mailing, expensive for postage, and extremely liable to damage in transit. On the other hand, prints may be good but too small to show up to good advantage upon inspection. Perhaps the popular $3\frac{1}{4} \times 5\frac{1}{2}$, or post-card size, is as near right as any standard size on the market. The prints are usually large enough, they are easy to mail in an ordinary envelope, the cost of postage is not prohibitive, and a letter is comparatively seldom damaged in the mail, not to mention the convenient feature of portability in the camera itself.

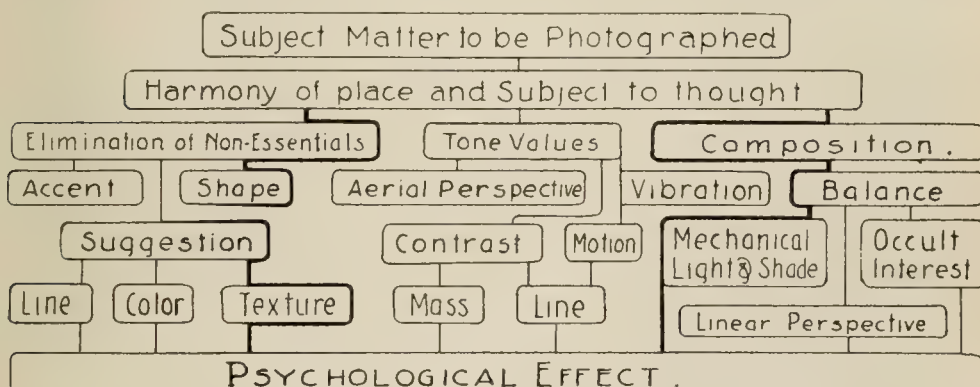
Finally, if you have or can get pictures with a real idea, but do not happen to be practiced in the expression of the idea, the logical thing to do is to get in touch with some one with practice in pinning ideas down in black and white. In such a case, you will not realize quite so much from some of your pictures, but on the other hand you will doubtless dispose of numerous prints that would otherwise remain unsold. Better sell on a commission than not sell at all. In any case, your prints will never be worth much in a bureau drawer. Get them out.

Composition and Balance

By A. T. De Rome



Last month we considered tone values, aerial perspective, vibration, contrast, motion, mass and line, showing their relative value and importance in dealing with the subject matter to be photographed. This month we will consider composition and the difference between balance of occult interest and balance of light and shadow. Although the diagram we have followed in this series of discourses calls for the consideration of linear perspective, I will here touch but lightly upon that subject, doing so for the benefit of those who missed the previous articles, in which it was dealt with several times in making clear different related points.



Most people I find have never succeeded in grasping the principles of composition because they started out with the determination to make hard work of it—and succeeded. When we were given eyes, they were so constructed as to focus only on one thing at a time, and our minds were made to think clearly of but one thing at a time; consequently our eyes and mind have formed the habit of paying attention to but one of a group of articles at one time, our mind refusing to think but slightly of any other part of the group than that which is of the greatest interest at the moment. Therefore, when the photographic image of a group of objects, all of like prominence, is presented to the eye for consideration, the eye, because of the smallness of the print, accepts it as a whole as the focal point. Because of this fact, the eye is unable to select any one object of the group for the mind's consideration, with the result that the eyes, with the mind, feel dissatisfied at being compelled to work under unnatural conditions and they rebel and reject the whole thing. On the other hand, had one object of the group been featured and the remaining objects made to explain or tell something about it, taking a secondary part, the eye and mind could then have performed their functions in a natural way, the picture

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giving joy to the beholder in proportion as the subject matter photographed was capable of expressing joy, thereby making the print an object to be coveted.

An even simpler way of arriving at an understanding of the psychological principles underlying composition would be to apply the same old rules governing the construction of sentences that one can remember his teacher used to so patiently explain in school. Consider your picture a sentence, the principal feature the subject, the thing that explains it the predicate, and so on down the line; grouping the things of minor importance around the object of greater importance. Or, let us put it in still another way. You have no doubt noticed in pictures of battleship crews and army staffs how the general, admiral or captain, as the case may be, is always given the place of prominence, next to him coming his first aid, then his second, and so on through the whole crew or staff. Apply these same principles to every picture you make, whether it be a portrait or landscape; in the portrait consider a single feature, an eye, the nose or chin, the general or captain, letting the other features support and strengthen the thought expressed by it, and in landscape let the old home farm house, cuddling up under the spreading trees, be the subject, the trees the predicate, other objects simply adding their support.

For my first illustration I have picked up a discarded print and enclosed with lines that part which is of the greatest importance, that part containing all that is necessary to a complete telling of the story. You will notice I have brought the figure slightly back of the center of the picture space, doing this, as I fully explained in a previous article, to give the rider the appearance of greater speed. Cover up enough of the print within the lines to bring the rider in the center of the picture and you will immediately see how set the arrangement becomes. The object of the picture is to express the thought of speed, and therefore we should resort to every possible means to attain that end. Analyzing my reasons for placing the lines just where I did and enclosing just so much material and no more, we will consider the picture a sentence: "The man flew through the country on his motorcycle." Our first thought is of speed in a horizontal direction, therefore we make our print of greater width than of height, because we want the eye to travel across and not up and down, carrying to the brain a sensation of horizontal motion. As our sentence is about the rider and not the trees, the last should simply suggest where the subject is, in the country, not the city; therefore we give the rider greater prominence by trimming them off. The same motive applied to the road; we only need so much as will suggest smoothness and speed. Having trimmed top and bottom, it is then an easy matter to determine the width, for the reasons stated before. The reason for not including the tree at the rear of the figure, as most amateurs would have done because it came out well in the print, is quickly seen when the print is viewed, first with it covered, and then with it exposed as a part of the picture. So long as it is included in the picture you will notice how the eye, first falling on the rider, quickly jumps back to this light spot. This is just the reverse of what is wanted, as the object is to make the eye move from the figure to something ahead and thus accent the forward motion.

Having made our subject, the man on the motorcycle, of proper importance, and conveyed the feeling of speed, then brought out quite clearly where the

COMPOSITION AND BALANCE



MY FIRST ILLUSTRATION



MY SECOND ILLUSTRATION

scene is laid, it remains but to select the proper paper on which to print the picture and determine the size thereof. In this particular case I would, were the negative a good one, suggest enlarging to about five inches in length, because the subject is not of any great importance—only a passing impression. I would print on a warm-toned paper to express a joyful feeling and use rather smooth stock as an added means of expressing swiftness. These conclusions may seem a trifle far fetched, but it is these apparently unimportant details that influence our subconscious minds, and the closer one observes these helpful little details, the sooner one's work will begin to stand out from the mass with some little distinctive character.

Balance in a picture may refer to two things, the balance of occult interest or the mechanical balance of light and shade, or of mass. Although their natures are entirely different, they work to the same end, holding the eye to the center portion of the print with as little inclination to wander as possible. My second illustration was chosen because it so clearly shows mechanical balance. Considering the entire print as it was originally taken, it is evident that the group of buildings, as a mass, was what interested the photographer. By assuming this composition to have a central point and considering the masses of the buildings as being balanced thereon as is the beam of a scales, the right-hand side is seen to be by far the heaviest and therefore gets the major portion of the beholder's attention. To correct this, we cut off the left end until we have a rectangle from the center of which the buildings will balance. The eye is then attracted with equal force to both sides, and mechanical balance is secured. On the other hand, if there had appeared in the lower left-hand corner of this original print an object in violent motion, even if of very small volume, the eye would be more strongly attracted to it than to the buildings, thereby balancing the print with attention value, and this we have termed occult interest because of its being something of the mind without any definite scale of measurement. I carried with me for some time a print showing a dog and horse, a print that I had carefully trimmed so that the mechanical balance was as nearly correct as possible. For the purpose of determining if I could measure this occult interest, and in order to gather definite data upon which to base my conclusions, I would show this print to my friends. Those interested in horses would invariably tell me the print was heaviest on the side bearing the horse.

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while those interested in dogs told me the opposite. The difference I found was entirely within the minds of the observers and dependent upon their personal preferences. However, occult interest must not be overlooked, and one will always get the strongest picture by arranging both the center of mechanical and the center of occult interest so that they coincide.



MY THIRD ILLUSTRATION

that where their trend is away from such center the eye is naturally drawn away, with the result that interest in the thought expressed in the picture is scattered and lost.

My third illustration is an excellent example of the average amateur's idea of composition. We have here all the material for a pleasing picture, but there are two distinct things featured, each to the detriment of the other; two subjects, as it were, of equal importance in the same sentence. For example, the figure with the kitten directs your attention to the kitten, while the man's figure attracts your attention with the thought of meeting a friend. Let us imagine the figure with the kitten enlarged to about eight inches in depth, giving us something worth while. Treating the other half of the print in the same way, we have another picture and an entirely different sentiment expressed. On the other hand, had the man and the figure in the doorway been interested in the kitten, the print as it stands would have formed a complete sentence with but one subject, thereby satisfying the eye.

The next article will be a resume of all that has gone before, and in it I will attempt to show, as far as possible, why certain people like certain kinds of pictures and what kinds of pictures make the greatest general appeal, and why.

We are students of words; we are shut up in schools and colleges and recitation rooms for ten or fifteen years, and come out at last with a bag of wind, a memory of words—and do not know a thing. We cannot use our hands, our legs, our eyes, or our arms. We do not know an edible root in the woods, we cannot tell our course by the stars, nor the time of day by the sun.—EMERSON.

Color Plate Exposures

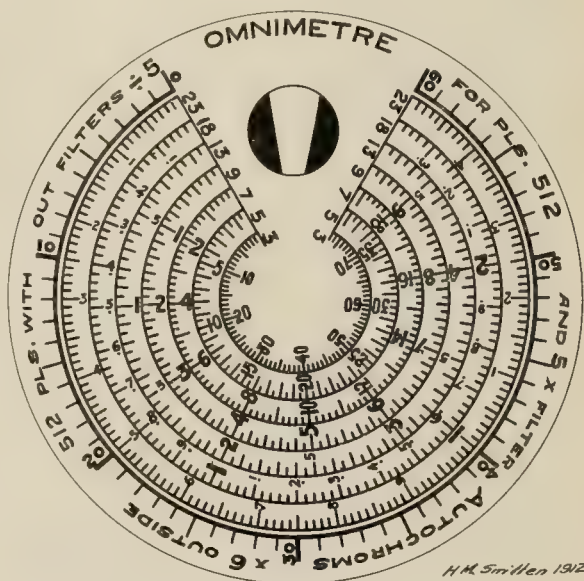
By Howard M. Smitten



Mr. Smitten made the dial for his Wynne meter by first making a drawing in India ink on white card and then photographing it down to the desired size, a diameter of one and twenty-seven thirty-seconds of an inch. Our original intention was to suggest that the reader do the same with our larger illustration. But, as our illustration is intended for the Zeiss system of stop numbers, Mr. Smitten has kindly prepared two other drawings of the dial arranged with the U. S. and the F systems of stops, photographed them to scale, and advises us that he will be glad to send any interested reader one of these dials if he will but designate the stop system desired, enclose stamp and address him care of CAMERA CRAFT, San Francisco, California.

Of all the various forms of actinometers in use by photographers today, it is probable that no particular one is better than another. They all serve their purpose and do their work indifferently well. The principal defect, however, of the ordinary meter becomes more apparent when it is employed for color-plate exposures. That is, meters of the watch form intended for use with ordinary plates do not give exact readings when used with color plates. This is, of course, natural and to be expected, as the majority of these exposures run into fractions of minutes instead of seconds. Therefore, when a certain subject that requires a small stop and a comparatively long exposure is to be reproduced on a color plate, recourse must be had to computation to determine the exposure.

In order to reduce such computations to a minimum, the meter dial, as illustrated, was devised. This dial is nothing more nor less than an adaptation of the slide rule. The exposures, as given by it, are the normal indicated ones for a U. S. 512 plate and a five times or 5× filter; such exposures being those necessary for subjects requiring neither subject factors nor multiples of any kind. On the outside arc of this dial, numbered from 0 to 60, inclusive, is shown the tinting time in seconds. This arc is divided into six equal spaces, each of which is, in turn, divided into ten units, each unit



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representing one second. The seven concentric arcs, next inside, are divided so as to give the exposure in seconds and decimal parts thereof for the seven stops that they represent. The stop numbers are shown, in the illustration, at the ends of these arcs. These particular stop numbers were used in the dial shown, as I wanted the dial for special use with a Carl Zeiss Protar of one hundred and sixty-five millimeters focus, having its stops so numbered. One can disregard this system of numbering and use the dial for any lens, as these stop numbers are only the actual diameters of the stops in millimeters and consequently correspond to the Zeiss, U. S. and F systems as per table below:

Zeiss system	23	18	13	9	7	5	3
U. S. system	2	4	8	16	32	64	128
F system	6.3	8	11.3	16	22.5	32	45

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The dial was designed for use with a Wynne meter whose original crystal had been broken. Before replacing, the glass was centered and a fine scratch made on the inside across its diameter, with a diamond. This scratch was filled with black to make it readily visible. The dial, being glued to the meter face, is stationary. The crystal, being movable, thus becomes analogous to the marker on a slide rule. All that is then necessary to obtain a normal indicated exposure is to turn the crystal so that the black line covers the division on the outside arc that represents the tinting time. Then reading along the diameter of the crystal towards its center, we find the normal indicated exposure for any stop. These various exposures are necessarily much more accurate than those given by any system of absolute numbers, chiefly on account of the physical difficulty of compressing them into such a small space.

As an example, suppose the representative reading for a certain subject is twenty-five seconds. The glass is turned so that the black line covers the twenty-fifth division on the outside scale, then the normal indicated exposure for a U. S. 512 plate and a 5× filter is .625, 1, 2, 4, 8, 16, 32 seconds for U. S. stops 2.5, 4, 8, 16, 32, 64, 128, respectively. If it is desired to remove the filter for any reason and expose without, divide the indicated reading by five. If an autochrome plate is to be used, multiply the indicated reading by six. It will probably be well to state in this connection that six is about the least multiple that can be safely used with autochrome plates on a brightly lighted landscape. This is equivalent to a plate speed of U. S. 17.

A discussion of the subject factors and multiples that must of necessity be applied to any meter reading need not be entered into here. They are largely a matter involving the personal equation and close observation of the individual and they also depend in no small measure upon the idea, if any, that is intended to be conveyed by the resultant picture.

In conclusion, it might be well to state that it is a popular fallacy to consider the different kinds of visible tint actinometers as instruments of precision. They are mostly no such thing. While they approximate the intensity of unobstructed daylight, they do not render any account of the light lost by reflection, refraction and absorption in the optical system used.

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

TO DRILL GLASS: Use any kind of a small drill that can be revolved rapidly, and apply turpentine as a lubricant. Work carefully, avoiding pressure enough to break the glass, and good results will follow.—J. F. V., New York.

FILM HOLDER: A good way to keep roll films in a damp climate, both before and after exposure, is to put the roll in a tin box such as ferro-prussiate and platinum paper comes in, by preference one of a size corresponding to the film. A strip of adhesive tape or plaster placed around at the junction of the cover with the tube will keep out all dampness.—Richard Spencer, Washington.

RETOUCHING AND SPOTTING GLASS: The form of glass used by jewelers and watchmakers is just the thing for spotting and retouching. It being held in place by the eyebrow, the hands are left perfectly clear for other work. These glasses or eye pieces cost from twenty-five to forty cents and will be found a great convenience by those doing work on prints or negatives.—J. F. V., New York.

PRINTING UNEVEN NEGATIVES: Using developing paper and printing at night, as most of us do, a negative of uneven density will often present difficulties. My plan is to print sufficiently to secure correct exposure in the thin portion and then build up the exposure in the more dense parts by using one of the common electric pocket flash lamps, allowing its light to reach only the desired portion.—William F. Smith, Illinois.

IMPROVED BLUE PRINTS: To secure a richer strength and color in blue prints and prevent them from fading, proceed as follows: Expose until the print is somewhat "burned," then wash thoroughly; and, when dry, paint over the blue or printed side with "Dioxogen," a proprietary article obtainable at any drug store, and allow to dry. This will bring out the lines perfectly white on a ground that is very blue. So treated, a blue print will not fade, even with long exposure to sunlight.—J. F. V., New York.

TIGHT STOPPERS: On page 329 of the July issue, a contributor gives his method of removing tight stoppers. In the January issue was described a method that might answer for winter, but not for July, unless one happened



SOME RECENT WORK

By F. MORRIS STEADMAN

to have ice handy. When one has only afternoon or evening for work, he does not like to spend time "seesawing" on the neck of a bottle with a string. My plan is as follows: For liquid, turn the bottle on its side till the liquid flows around the stopper, continuing turning the bottle around, when, in a few minutes, the stopper can be removed. A damp or wet cloth placed around the stopper of bottles that contain dry or powdered chemicals will permit the removal of the stopper in much the same way.—E. L. F., Wisconsin.

PLATE BACKING: A plate backing to prevent halation is made as follows:

Mucilage	1 ounce
Caramel	1 ounce
Burnt sienna, ground in water.....	2 ounces
Mix, and add alcohol.....	2 ounces

Apply this mixture, using a camel's-hair brush, to the back of the plates in the dark-room. Before developing, wash it off with a damp rag or sponge.—B. B. L., Ohio.

REMOVING OLD FILMS: E. Stanley Thomas, Ohio, gives us, in a recent issue, a good method of removing film from old negatives; but any one using it will have to be careful not to break the plates either by getting the water too hot or by reason of the plates sticking to the bottom of the dish when the water

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boils. To avoid the danger of breakage, put a cloth, folded to give four or six thicknesses, in the bottom of the pan and place the plates thereon. Those having racks that fit into developing tanks could use them, as they would keep the plates from touching the bottom of the pan.—E. L. F., Wisconsin.

COPYING YELLOW PRINTS: One often finds himself confronted with a print that has faded to a sickly yellow that is wanted copied. The following plan, which I have found most successful, will no doubt prove of value to overcome the difficulty. Obtain from a glazier a piece of blue glass of the palest tint made, a sort of Cambridge blue diluted fifty per cent. Moisten and squeegee the yellow print into optical contact with this; and, when thoroughly dry, photograph with a small stop and a full exposure on an isochromatic plate. The glass must be placed in such a position that no reflections are present, these generally being avoided by using one or more tissue paper screens at one or more sides. Use a pyro-soda developer and work for good contrast. One will find that the blue glass emphasizes detail in the print, rendering it far more distinct. With proper exposure and development, the copy will be much better than the original, as, instead of being dead and flat, it will be quite brisk and clear.—B. B. W., Indiana.

A GOOD INTENSIFIER: One that I always use with the greatest of satisfaction is made up in three solutions, as follows:

No. 1: Potassium bromide	1 ounce
Water	16 ounces
No. 2: Bichloride of mercury.....	1 ounce
Water	16 ounces
No. 3: Sulphite of soda.....	1 ounce
Water	5 ounces

Soak plate well in water; then immerse for about five minutes in No. 1; pour this off and flow plate with No. 2 until film is thoroughly whitened. Wash plate well and immerse in No. 3 until negative resumes its natural color, after which wash thoroughly and place in rack to dry. Intensifying may be done immediately after fixing and washing or at any later time. The density of the negative depends upon the length of time it is left in No. 2. Unless the negatives have been thoroughly fixed, they will turn yellow from this treatment.—G. B. C., Ohio.

AN EASY WAY OF TITLING NEGATIVES: I have noticed a number of methods of titling negatives that have been advanced in this department of CAMERA CRAFT in the past. Each writer on the subject claims to have an easy and simple method. Yet, although I have personally tried many of the plans suggested, I am still of the opinion that the following system is one of the best and simplest known. Procure a thin piece of architect's tracing paper and draw thereon two light, parallel pencil lines, about one-eighth of an inch apart. These are guide lines for the lettering, which should be done as uniformly as possible, using Higgins' Waterproof India Ink and a rather coarse pen. After completed, allow to dry thoroughly, and then trim the edges even and close,

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being careful not to cut away any of the lettering. Leave a small bit of margin at the two ends and on these put a little good mucilage, applying it to the lettered side. Turn this strip over and press it into contact with the film side of the negative in the desired position, taking care to have the initial word come to your right with bottom edge of the title towards the bottom of the negative. Rub down well with a piece of blotter, print the picture, and you will be pleased with the results. Try this method the next time you have occasion to print a picture that must carry a title.—Hulburt, Oregon.

UNSUSPECTED PERIL: For a good many years photographers throughout the country, perhaps throughout the world, have been using wood alcohol; using it to heat water, dry negatives quickly, clean glass, reduce over intense portions of negatives, and for other purposes. All the time they have been doing this they were childishly, blissfully, angelically innocuously in danger of blindness, both themselves and their associates and assistants. Laura Crozier, writing in a recent issue of "Good Housekeeping," tells something of the danger attending the use of wood alcohol, and tells it in such a way that no one, except he be destitute of ordinary ten-year-old-child sense, could neglect the warning.

A thousand cases of death or total blindness, brought about by the use of wood alcohol, have been put on record in the last twenty years. Many preparations sold in the stores, such as witch hazel, bay rum, eau de cologne, Florida water, flavoring essences, wines, cordials, whiskies, liniments, etc., contain wood alcohol, as, being cheaper than grain alcohol it tempts the unscrupulous manufacturer. The author of the article, quoting Dr. Royal S. Copeland, dean of the New York Homeopathic Medical College, says: "The tissues of the body have a wonderful power of abstracting from the blood streams substances that seem to suit their particular appetites. Unfortunately for mankind, the tissue of the optic nerve has a proclivity for wood alcohol."

A shop-girl, preparing her morning coffee over an alcohol stove before hurrying to work, began to lose her sight, and it took six months' treatment to save her from blindness. A man accepted a drink of whisky from a friend's flask; became unconscious, and when recovered, had lost his sight for life. Another man became totally blind from taking a drink of whisky in a saloon, wood alcohol having been used in adulterating the liquor. Four men varnished the inside of a beer vat in a brewery; one was only slightly effected, one lost the best part of his eyesight permanently, and the other two died. A man was blinded from varnishing the inside of a closet in a hotel. Another was totally blinded after varnishing some benches in a school house. Other cases are described in the article.

Although denatured alcohol, grain alcohol to which some pyridine or benzine has been added in order that the taste will prevent its use as a beverage, is now as cheap as wood alcohol, the latter continues in use by some photographers, mainly because of old formulas calling for it. As far back as thirty years ago, the writer of this item read formulas in the "British Journal of Photography," in which methyl alcohol was named as the principal ingredient. How many of the photographers of the United States are still using this dangerous alcohol it would be impossible to say.—Theo. E. Peiser, California.



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A PHOTOGRAPHIC MONTHLY

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No. 10

Planning the Winter's Work

It is the regular practice of those who set themselves up as advisors to the vast army of amateur photographers, to come forward about this time and urge that the camera be not shelved during the winter months. They explain how much more interesting is the tracery of the empty branches against the softened sky than the heavy masses of summer foliage can possibly be. They dwell upon the beauty of winter scenes, particularly those that are mantled with the kindly snow that transforms even the most unsightly back alley into a scene of beauty when reduced to the confines of a photographic print. Of course, we here in California do not need this assurance as to the folly of shelving our camera during the winter months, for the simple reason that we have practically no winter months, at least so far as snow mantles are concerned. But as a large proportion of our readers are located where winter weather imposes some little tax upon the enthusiasm of the camera user, I would like to offer a little advice on the subject of winter work that at least has the merit of being more easily followed, and followed with more comfort, than that usually put forward. During the summer months the average amateur is too busy making exposures to give much time to other work; in fact, there is a shortness about the evenings and a degree of warmth about the days that make them not exactly suited to many kinds of employment that become quite enjoyable at another season. Let our average amateur decide that he will at least make a beginning in the matter of getting his negatives of the past summer into the best possible shape, and he will find it quite easy to go through with the work. He should not set himself too hard a task; let him ignore all except the negatives produced since his camera was put into commission last spring. Let the first thing be the getting of them all together and numbering them in consecutive order. If the proportion of failures has not been so great as to necessitate the use of too much time and material, it will be well worth the expenditure of both these items to make a print from each negative in the collection. These, placed in an inexpensive or home-made album, will not only serve as an index of the negatives, but they will, if carefully made on one grade of paper, give the worker a fair indication of their individual merits and shortcomings. Some are found too thin, others too contrasty, still others defective from a variety of causes. This suggests seeking a remedy for the several ills, preferably one kind at a time. The ones that are too thin should be intensified. The worker can select from those that

are defective in this line a few that will be no loss if spoiled; and, experimenting upon these, gain experience that will enable him to greatly improve the others having the same fault. A like procedure can follow with the ones that are defective in other ways. After this it will be well to devote a little study to the matter of masking off those parts of each negative that are not wanted in prints showing well-selected subject matter. Then, if the winter is not fully spent, the making of prints, enlargements, slides, transparencies and the like can be taken up.

But think of the manifest advantage of this plan for the winter's photographic work. In addition to all that one will have learned by a systematic investigation of intensifying, reducing, and other photographic processes, think of the advantage of having all one's negatives for the past season in perfect shape and in such order that one can at once place his hand on any desired subject. Not only that, but by the time they have been put in shape as suggested, one will have a pretty good idea as to the capabilities of each negative for the several printing processes he may use. All in all, it would seem that the plan outlined is the logical one, the one best calculated to assure a maintenance of the interest the worker may have in his photographic work. Doing as suggested, the too common practice of making exposures and accumulating a mass of good, bad and indifferent negatives that one really takes but little interest in because of their chaotic and uncertain condition, is replaced by an ever-increasing stock of satisfactory negatives that have a value in their owner's eyes, a value augmented by their availability for the real end of all photography, satisfactory prints.

The Goodwin Patent Litigation

The New York EVENING POST of August sixteenth reports that the litigation over the ownership of the Goodwin patent and the validity thereof, that has extended over a period of eleven years, has resulted in a decision, handed down by Judge John R. Hazel, of the United States District Court of Buffalo, in favor of the Ansco Company. It appears from the finding that any transparent nitrocellulose film, however made, comes within the scope of the Hannibal Goodwin patent, this patent and the right to manufacture being the property of the Ansco Company. The final outcome will be determined on the appeal to the United States Supreme Court, Judge Hazel's findings being, however, of much interest in their bearing upon this long-drawn-out litigation.

Wrong Credit Given

On page 339 of our August issue was reproduced a picture with the title, "Looks Like Florida, But Is Ohio," and incorrectly credited to Mr. Webb, whose excellent article it accompanied. The picture should have been credited to C. J. Stilwell, as the block was made from one of his fine pictures and is one that was intended to illustrate an excellent article of his which we will be using in an early issue.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Restoring Faded or Discolored Photographs

A task which is often thrust upon the amateur photographer is to make the most of some silver print which has faded or yellowed, until it is no longer much more than the ghost of what it once was. The task is one which is by no means easy; in fact, it is often impossible to do anything to the print itself that shall make it look much better; while whatever may be done, carries with it the risk of injuring the print beyond all hope of restoration. On this account, the first step that should be taken is to rephotograph the picture, either with the idea of making the fresh photograph serve instead of the faded one, or at least to provide a record of its subject should the restoration process prove to be a failure.

It may not be well known that many silver prints, in which the fading action is mostly a yellowing of the image, photograph very easily, the yellow appearing to the non-orthochromatic plate almost as if it were black, and so the copy negative has plenty of contrast and gives nice bright prints. In order to do this, the whites of the old print must not be very yellow; if they are, copying is not likely to give a result that is actually better than the original, although in any case it should give one that is as good. If the image has its full vigor, but it is the whites that have yellowed, then instead of using an ordinary plate, the best result will be obtained on an orthochromatic plate with a yellow screen.

Copying work of this kind is usually best when done out of doors, in as bright a light short of direct sunlight as possible. The exposure must be a full one, and development full also. It is economical to expose the first plate in a series of strips, so as to find out by actual trial the exposure which will give as vigorous an image as possible. When in this way a record of the subject of the faded print has been obtained, then and only

then should it be exposed to any operations which involve wetting it.

The danger of attempting to restore a faded print lies in one's ignorance of the state of things which has brought about the fading, and consequently the risk of doing something to the picture which shall leave it in a worse condition than it was originally. Hence the stress which has just been placed upon photographing it before doing anything else to it, in case it should be irretrievably damaged in the attempt to restore it.

The method which is generally used to make the best of a faded silver print is a form of mercurial intensification, and as the fading is in all probability due to the presence of hypo in the print, which is also a fertile source of stains and marks in mercurial intensification, the first stage of the process must be to remove all risk of this. Alum decomposes hypo if it is given sufficient time; and alum also hardens the gelatine itself and makes it less likely to be injured by the other processes. So the first stage is to place the print in a solution of alum. Half an ounce of ordinary, or potash, alum to the pint of hot water is the correct strength, and the solution may be used as soon as it is cold. The print should be left in this for three or four hours, face downwards, and may then be washed in four or five complete changes of water, draining well in between each, leaving it for five minutes in each change. It is then ready for the restoration process.

The first stage of this is to immerse it in a solution of mercuric chloride slightly acidified with hydrochloric acid. The usual stock saturated solution of the mercury salt may be diluted with an equal bulk of dilute hydrochloric acid (one part of acid to fifty parts of water). In this the print is left, with occasional rocking, until the action seems to have gone as far as it will. No particular appearance at this stage can be described, as different prints vary much in the extent to

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which they bleach in this solution. All that can be done is to keep the print therein until there seems to be no possible doubt as to the action having gone as far as it will. It is then washed in six or eight changes of dilute hydrochloric acid (one to fifty, as just mentioned), and finally in three or four changes of water, and is ready to have the image darkened.

The dilute ammonia which is generally used for this purpose when negatives are being intensified is best avoided when the intensification process is being used for restoring prints, as it has a tendency to stain and to act irregularly. The most satisfactory darkening agent appears to be a metol developer of the following composition, which is due to Mr. Blake Smith. It should be freshly made up for the purpose:

Metol	45 grains
Sodium sulphite, crystals.....	130 grains
Sodium carbonate, crystals....	270 grains
Water to	10 ounces

Placed in this solution, the print ought to darken very rapidly, and when it has done so all that is needed is a further washing in six or eight changes, when it may be put up to dry. The whole of the operations may be carried out in daylight, and on no account should any attempt be made to curtail any of them.

Should the result of this treatment not be satisfactory, the print must be looked upon as beyond restoration. It is possible that the intensification, although not in itself very satisfactory, may have given an increase of vigor which will allow the print to be photographed successfully. This is often practicable when the whites of the picture are very yellowed. By photographing it on an orthochromatic plate, preferably on one that is red-sensitive, with as deep a screen as possible, this yellowing of the whites may be concealed altogether in the copy, and a good bright picture obtained. But, as was pointed out at starting, there is always a grave risk in exposing an old print of unknown condition to a series of chemical baths, which, therefore, should only be regarded as the last resort. —Walter Binfield in *Photography and*

Reducing Dark Prints

Photographers are apt to forget printing frames and over-print at all seasons of the year, but during the bright days of summer

over-printed pictures are certainly the most common. It is then that the amateur goes in search of methods of reducing such prints; and more often than not his search is fruitless because of the scarcity of reliable methods. Text books tell us that it is cheaper and better to make a fresh print than to make a special solution for reducing; but much depends upon the size of the pictures, the number one has over-printed, and the particular reducing solution employed.

The advice usually given to those who over-print is to use the ordinary hypoferricyanide reducer, as used for negatives, but made very weak; one-quarter strength is usually named. But this is scarcely weak enough; and however weak it may be, it does not serve well for printing-out paper prints, although with care it may be used for over-developed bromides. Ferri-cyanide and hypo is, in my opinion, quite unsuitable, as it is liable to eat away all the delicate half-tones in the picture and perhaps alter the color as well.

Self-toning paper is one of the most popular printing mediums amongst amateurs today; and it is one with which the worker is liable to go wrong as to the depth of printing, unless he keeps to one particular make of paper. These papers vary considerably in the strength which they lose in fixing; some need carrying only a trifle beyond the depth desired when finished, while on the other hand some lose a great deal and need to be printed very deeply indeed to allow for the reduction.

Prints on self-toning paper are best reduced by giving them a prolonged soaking in a strong hypo bath. The prints are first fixed in the solution recommended by the makers of the paper; and then, if after normal treatment they are found to be too dark, a special fixing solution of two ounces of hypo dissolved in five ounces of hot water may be made up. When the solution is cold the dark prints are simply placed in it and moved about as often as possible until the desired reduction has taken place. The action is slow, but the prints will be of better quality than when other methods are employed. The strong hypo bath need not be thrown away, as another four or five ounces of water will make it a good fixing bath for negatives.

There are two good methods of reducing ordinary printing-out paper (that needing

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toning and fixing) and the choice depends upon whether the worker desires to reduce before toning and fixing or afterwards. Both give practically the same result, and as many do not decide upon reduction until the finished print is seen, the method of reducing the fixed, washed and perhaps dried print will be the more serviceable.

The reducing bath is made with ammonium sulphocyanide and potassium ferricyanide. The formula, due to A. Haddon, is: potassium ferricyanide two grains, ammonium sulphocyanide ten grains, water, one ounce. The bath will serve also for reducing negatives; but when it is required for the latter, the ferricyanide must be increased from two to five grains per ounce. Such a reducer keeps well, whereas if hypo is used with ferricyanide the mixed solution will not remain in an active condition even for a day. The dark toned and fixed, and washed, prints are simply placed in the reducing solution and rocked until sufficiently reduced, and then washed well.

The method selected for reducing before toning and fixing depends upon whether the prints are to be toned with gold or sulphide. If the ordinary sulphocyanide and gold bath is to be used, the prints should be reduced in a weak solution of ammonium persulphate, say four grains to the ounce, and then washed well before toning. Some have advocated the use of this reducer after toning and fixing; but I do not recommend it, as it does not appear to act satisfactorily or uniformly with all makes of ordinary printing-out paper.—F. Hudson Tudor in *Photography*.

Combined Development and Fixation

The attention which has recently been devoted to the simplification of photographic work makes the appearance of a booklet on this subject by M. Crémier singularly opportune, and he himself is ardently enthusiastic as regards the advantages of the method of which he treats. So far from tending to the production of hard negatives without half-tone, he contends that the method of combined development and fixation gives an extraordinary modeling in the skies, and renders all the clouds; indeed, in this respect it rivals slow development in the vertical trough (stand development).

That combined development and fixation does not necessarily involve the use of so-

dium hyposulphite is obvious, as Abney has shown that sodium sulphite is a fixing agent, and the late Mr. Horsley Hinton mentions a case in which a film was left by oversight in a developing solution containing sulphite, and after the lapse of a considerable time it was found to be completely fixed.

A combined bath recommended by M. Crémier for general use is the following:

Water	100 c. c.
Sodium sulphite, anhydrous	5 grammes
Diamidophenol	1 gramme
Sodium hyposulphite	2 grammes

Plates that have received an approximately correct exposure show signs of an image in thirty seconds, and in about twenty minutes the development and fixation are complete. Instructions are given for varying and adapting this developer to various exigencies; in the case of bromide paper, for example, the hyposulphite is increased to two and one-half grammes, and an addition is made of ten drops of a ten per cent potassium bromide solution.

To obtain M. Crémier's booklet ("Le Développement-Fixage Combinés") application should be made to the publisher, M. Charles Mendel, 118, Rue d'Assas, Paris; the price being sixty centimes, but the publisher asks for the addition of twenty centimes for postage.

To M. Victor Crémier we are also indebted for a method of development after fixation, which is described in his handbook, published by M. Gauthier-Villars, of 55, Quai des Grands-Augustins, Paris, price two francs, the exact title of the book being, "Le Développement en Pleine Lumière, après Fixage."

Those who wish to make a first trial of the method should proceed as follows, and then M. Crémier's book should be obtained for further instructions:

A rather slow plate is exposed four times as long as would ordinarily be the case, and the exposed plate is immersed in the dark in a two per cent solution of hypo (crystallized sodium thiosulphate); after five minutes or so the dish is brought out into the full light, and, when the plate is quite clear, or a little after, the plate must be quite thoroughly washed. Ordinary fixation to be satisfactory must be for about double the time required to produce an appearance of clearness, but a somewhat less thorough fix-

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action gives better gradations in the present case.

The developer is prepared as two stock solutions:

A: Silver nitrate 4 grammes
Water, distilled 25 c.c.

To this add gradually and with agitation:

Ammonium sulphocyanide... 24 grammes
Water 75 c.c.
Sulphite of soda, anhydrous... 12 grammes
Hypo 5 grammes
Ten per cent potassium bromide solution 0.5 gramme

The solution should be filtered and preserved in a yellow bottle, as light acts slowly upon it.

B: Metol 2 grammes
Water 120 c.c.

Dissolve, and add

Sodium sulphite, anhydrous 10 grammes

Sepia Toning with Colloid Sulphur

In a preceding paper we have shown the possibility of toning developed silver prints in the cold by means of colloidal sulphur, employing for this purpose a solution of hyposulphite of soda mixed with a colloid substance, such as glue or dextrine, and with addition of a small quantity of acid. The colloidal sulphur is thus slowly produced in consequence of the decomposition of the hypo; it immediately acts upon the silver of the image.

We have found that the colloidal sulphur may be obtained in the substratum itself of the image, making use of this latter as the colloid body and employing the hypo with which it is impregnated as it comes from the fixing bath. It is thus sufficient to immerse the print without rinsing it in a weak solution of hydrochloric acid, such as one of one per cent strength. In order to insure regularity of action, the prints should remain in the acid solution, at a temperature of from sixty to sixty-three degrees Fahrenheit, for thirty to forty minutes.

The tone is obtained by washing in water for about an hour and a half, which is the time necessary for the complete reaction.

The formation of the silver sulphide no longer takes place as we have already indicated in previously dealing with colloidal sulphur toning.

The tones obtained by this process are very similar to those produced by a hot mixture

of hypo and alum, or with colloidal sulphur in the cold.

Nevertheless, the method possesses a drawback when care is not taken to keep the prints for a sufficient time in the hydrochloric acid bath. In this case dichroic tones are readily obtained, this effect arising from the fact that the acid has not penetrated through the entire thickness of the emulsion film. The darker part, that is to say, those containing the most silver, are incompletely sulphided, whilst the reaction is complete in the lighter portions where less silver is present.

This defect is not produced when the sulphiding is done by means of colloidal sulphur formed directly in the solution, since in this case the sulphur is in great excess in comparison with the silver of the image. The new process, however, is of interest in consequence of its very simple character and low cost, for the only reagent required is a weak acid solution.

The various processes of sulphiding developed silver prints based on the use of alkaline monosulphides, such as ordinary crystal soda sulphide, afford a rapid toning action, but possess the disadvantage of veiling to a greater or less extent over the high lights. The same thing is the case with the processes recently described by Desalme, based on the use of sodium bisulphide formed either by dissolving sulphur in an alkaline sulphide solution or by adding to this latter an oxidizing substance, such as hydrogen peroxide or ammonium persulphate.

By producing the sulphiding action, say, at one hundred and seventy-five degrees Fahrenheit, by means of the mixture of hypo and alum, or in the cold by means of colloidal sulphur, as recently described by us, pure high lights are obtained. Moreover, in this latter process it is not necessary, as in the former, to carry out preliminary hardening of the gelatine. As Mr. Desalme has pointed out, there is, however, the drawback to the use of colloidal sulphur of the prolonged washing which is necessary to obtain the final tone.

We have observed that it is only during this washing that the sulphur, in a very finely divided state retained by the gelatine film, exerts its action on the developed silver image.

In order to remove the necessity for this long washing, an hour and a half, the two

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operations of removing the hypo of the fixing bath and sepia toning of the prints may be carried out together.

The prints may be subjected to the action of the colloidal sulphur immediately after fixing. On removal from the toning bath, that is to say, after fifteen to thirty minutes according to circumstances, the prints are washed for about one hour and a half, the time necessary for obtaining the final tone.

Lastly, it may be mentioned that in the direct method of toning with bisulphide of sodium, as described by Desalme, the tone, on removal from the toning bath, is not the final one as the author states it is. This tone is changed in the washing water as it is when toning with colloidal sulphur; it reaches a permanent stage only after somewhat prolonged washing in water. Thus there seems to be a certain quantity of sulphur retained by the gelatine of the emulsion film, this sulphur when subjected to the wash water acting as in our process of toning with colloidal sulphur.—Lumiere and Seyewetz, in *British Journal of Photography*.

An Easy Way of Measuring the Focal Length of a Lens

It is useful for many purposes to know the focal length of the lens we are using, and fortunately it is a quite easy matter to measure this quantity within a sufficient degree of accuracy—i. e., not more than, let us say, one-tenth of an inch error under ordinary conditions.

For very rough and ready purposes, it often suffices to focus the lens for any distant object, and then measure the distance between the focusing screen and lens stop. This method is liable to give an appreciable error of a quarter or half an inch.

The following method may or may not be new, but at any rate it is not commonly known, and is at the same time easy, and gives a fairly correct result.

On the ground glass, with finely pointed, hard pencil or pen, make two short, straight, upright lines, one an inch to the right, the other an inch to the left of the center of the ground glass. These two marks are, therefore, two inches apart. Now take a strip of white paper two feet or so in length and, with a ruling pen and good black ink, make two clear, straight, upright lines exactly eighteen inches apart.

Pin this paper against a well-lighted, up-

right wall on a level with the lens. Place the lens opposite the center of the paper strip, and find the position where the two eighteen-inches-apart lines are in sharp focus on the two-inches-apart lines on the ground glass.

The largest stop of the lens is to be used, or the practical "depth" will make it difficult to ascertain the position of sharpest focus.

Now take note that as our eighteen-inch paper strip gives us a two-inch (ground-glass) image, the ratio or scale or proportion is 18 to 2 or 9 to 1. It is the "magic and mystery" of these numbers which make the process so easy—i. e., practically devoid of calculation.

We now need only measure the distance between the lens stop and the center of the paper strip on the wall, and divide this by ten, to get the focal length of the lens. For instance, suppose this lens-to-wall distance is four feet six inches—i. e., fifty-four inches. Then the focal length of the lens is five and four-tenths, or something very near that.

But it may not be convenient to measure the distances from the lens stop; e. g., the lens may not be get-at-able, etc. In that case we measure the distance from the center of the ground glass to the center of the paper strip on the wall, which we will suppose, by way of example, to be five feet three inches—i. e., sixty-three inches with another lens. We now multiply 63 by 9, getting 567, and divide this by 100, getting 5.67, which we should probably write as 5.7, as .67 is nearer .70 than .60.

Of course, having once got our camera into position, and the image sharply focused, it would be as well to apply both methods when possible, and so avoid any glaring discrepancy.

In general, we shall find that the two results thus obtained do not differ by more than a tenth of an inch, if as much as that.—F. C. L., in *Amateur Photography*.

Water-Developing Kallotype Paper

British Letters Patent No. 11,193, May tenth, 1912, says: In making up the sensitizing solution according to the invention, a solution of ferric oxalate and oxalic acid is mixed with a solution of nitrate of silver, and to the mixture thus formed are added a few drops of hydrochloric acid and ferrous-chloride; after which the mixture is applied

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to the paper in the usual manner. After drying, the paper is ready for use.

By the union of the ferric oxalate with nitrate of silver and the treatment of the mixture with hydrochloric acid and ferrous-chloride, there is obtained a new series of blacks, which produce a good imitation of stamps, manuscripts and engravings. The utility of the invention becomes still more practical on account of its economy, as in this process water only may be used in the development.

Experiments have proved that with this process the fiber of the paper is by no means injured, and the process of printing photographs may be carried out with ease and comparative rapidity. In the following a description is given for use of process.

A solution (A) of the following substances is warmed:

Ferric oxalate	36 grammes
Oxalic acid	5 grammes
Distilled water cc.....	100 grammes

Since the ferric salt of commerce contains a certain quantity of ferrous salt, it is necessary to convert the latter into the former. This may be done by adding to the cooled solution above a sufficient quantity of a ten per cent solution of permanganate of potash. This method of treatment has the important advantage of making it easier to measure the quantities required and to be able to determine exactly the moment in which the oxidation takes place, that is to say, the moment in which the ferrous salt is transformed into ferric salt, especially if it is in the presence of oxalic acid. In fact, the permanganate, after having oxidized the ferrous salt, oxidizes the oxalic acid, transforming it into water and carbonic acid, which acid is set at liberty with active effervescence. This is the proof of the oxidation having taken place, without the long calculations required in other methods of oxidation, for instance, with nitric acid.

A sixteen per cent solution (B) of nitrate of silver is then prepared.

For use, the two solutions (A) and (B) are mixed, in the proportion of three of the first and one of the second, adding one drop of ferrous chloride and one drop of hydrochloric acid to every ten cubic centimeters of the solution. This mixture is applied, in a weak light, on ordinary paper, which, when dry, may be used at once, although it is bet-

ter to leave it some days. The paper thus prepared can be developed in water or it may be developed with soda or potassium salts, neutral or acid.

In order to eliminate the undissolved ferric salt (that is to say, without impression of the light) the copy must be immersed in a weak solution of oxalate acid of potash, if a good black color is desired; or in a weak solution of oxalic acid, if sepia is preferred; in both cases the photograph must be well washed until the yellow color has disappeared; after this, the copy must be washed again in running water, or water often renewed, and fixed with a weak solution of hyposulphite, adding a few drops of hydrochloric acid. In about three to four minutes this is finished and the copy, after being rinsed, is put to dry—Teresa del Fabro, Via Statuto, Rome, in *British Journal of Photography*.

Guarding Against Deterioration

Unframed photographs, especially bromides and platinum, which are used for business purposes by decorators, house agents, and designers, rapidly deteriorate through the surfaces becoming dirty. In the case of bromides the actual image often becomes sulphurized, causing a metallic tarnish to appear on the shadows, while the half-tones become more or less yellow. This undesirable state of things may be avoided in a great measure by coating the prints with a protective varnish similar to that used by playing-card makers. It is composed of shellac and borax, and is commonly known as "water varnish." A useful formula is: Powdered white shellac two and a half ounces, borax one ounce, water twelve ounces. Dissolve the borax in hot water and add the shellac, keeping the solution hot till the shellac is dissolved. This is best done by standing the jar or bottle in a saucepan of hot water. When cold the solution is strained through a double thickness of muslin, and is ready for use. It may be applied with a brush or flowed over the print. Platinum must be sized with gelatine, or the varnish will penetrate. Bromides and gelatino-chlorides require no preparation. This varnish is particularly valuable for uranium-toned bromides, which are notoriously fugitive if exposed to the atmosphere, but are fairly permanent when varnished.—*British Journal of Photography*

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Duplicating Negatives

A Washington correspondent asks as to the most universal procedure in the making of duplicate negatives. It is first necessary to make a positive or transparency, using a slow plate, exposing it in contact with the negative to be reproduced. Of course, if the negative to be duplicated is inclined to hardness, an ordinary plate will serve the purpose better. The exposure is made in the dark-room, and opening the side door of the ruby light or the burning of a few matches will give the required light action. The developer used should be the normal one with which the worker is best acquainted, the addition of the bromide depending upon the amount of contrast needed. If the original be quite flat, bromide is indicated in order to increase somewhat the brilliancy of the resultant duplicate. In developing, do not work for a lantern slide effect of brilliancy, but aim rather to secure the same quality as would be desirable in a negative, as that is really what the positive is. It should have a good amount of density throughout, with practically no clear glass anywhere. Taking this positive and the making of a new negative therefrom is simply a repetition of the process just described. Of course, if an enlarged negative is desired, recourse must be had to an enlarging apparatus, the plate being placed in the position of the bromide paper. Doing this, a good plan is to put a sheet of black paper or velvet behind the plate to cover the usual white paper that graces the surface of the enlarging easel.

Ink Spots on Photographs

Recently I answered an inquiry, by mail, as to the removal of ink stains from photographs. This same oxalic acid was recommended. The proper strength is a drachm of the acid to an ounce of water. This, rubbed on the print with a gentle, circular motion, will cause the spot to disappear in most cases. A few of the old-fashioned inks will not respond to this treat-

ment, but it will usually succeed. Another good remover is a saturated solution of calcium chloride in water. This should be applied with the greatest care, as little or no friction is permissible with it.

Cleaning Tarnished Brass

An Illinois reader wishes to know how he can clean tarnished brass. A dilute solution of oxalic acid will clean brass perfectly, the best plan being to immerse the article and shake about. When clean, the acid must be well rinsed off and a polishing with whiting and soft leather or cloth given. Our correspondent must remember that most articles of brass are given a coating of transparent lacquer and this must be replaced if the newly cleaned article is expected to retain its untarnished surface for any length of time.

Shiny Spots on Carbon Prints

The small shiny spots that our Oregon correspondent finds on his carbon prints are due to minute bubbles between the tissue and the support. To prevent these in the future, he should soak the support for a longer time, using tepid water, rubbing both sides of the support with a brush or bit of soft sponge. These minute particles of air originate in the fiber of the paper and it requires soaking in water to bring them to the surface where they can be rubbed off.

Test for Hypo in Mounts

Put a few small pieces of granulated zinc in a wide-mouthed bottle holding a pint or more. Half fill up with water and then insert a few small pieces of the paper or card under suspicion, lastly adding a half drachm of sulphuric acid. Over the mouth of the bottle place a piece of filter paper, turning or crimping it down around the edges, and on the center of this paper place a drop of sugar of lead solution. Should the spot of lead solution show a brown stain at the end of about half an hour, the presence of

hypo in the cards or paper is indicated. This is a very delicate test and will disclose the presence of the faintest trace of hypo in the stock being investigated.

Toning Method for Lantern Slides

A lantern slide made on any of the ordinary black tone plates can be given a fine warm black color by being left for a day or two in the hypo-alum solution used for toning bromide prints. The solution must have been used for a number of prints, if the slide is to be a good color, and is not to be too weak in contrast at the finish; and it should be looked at occasionally, and rinsed under the tap, in case there should be any deposit on its surface. By hardening it in: formaline one part, water six parts, for three or four minutes, it may be toned in about half an hour in the hot hypo-alum solution; but nothing seems to be gained by hastening the operation in this way.

The toned slide may have its color further

modified by treatment with a sulphocyanide and gold toning bath such as is used for p.o.p., but preferably more concentrated: say, ten grains of sulphocyanide and one grain of gold to the ounce of water. Red and crimson colors are thus obtained.

It is the writer's experience that almost all toned slides without exception are greatly improved by varnishing. For this purpose the dammar varnish which is sold for autochrome work answers excellently. The slide must be made thoroughly dry by holding it in front of the fire, and as soon as it has gone cold again is varnished by pouring. The excess of varnish should be poured off into another bottle, and when this is full its contents may be filtered through cotton wool. If this is not done there will be specks of dust on the film of varnish on the slide which are sure to appear very plainly when magnified on the screen.—Thos. Butterfield in *Photography*.



OUR BOOK SHELVES

"Amateur Portraiture"

The above is the individual topic dealt with by PHOTO-MINIATURE No. 127, the last issue of that valuable set of monographs on photographic subjects to reach our desk. The sub-title reads: "A Survey of Its Possibilities by an Expert; The Choice of Cameras, Lenses and Apparatus; Practical Methods; What to Do and What to Avoid." Sufficient is to say that the author, Paul L. Anderson, fully satisfies the expectations created by this rather promising suggestion as to the wealth of information within the book. Mr. Anderson is a writer with something to say and the faculty of saying it in an instructive and entertaining way. What he has to say is based on the actual experience of one with a love for his work and a desire to inspire the same love in the minds of his readers. A wealth of related illustrations is interspersed with the text, forming a book that every user of the camera should possess and treasure. The price is but twenty-five cents, obtainable from all dealers or

direct from the publishers, Tennant & Ward, 103 Park Avenue, New York.

"Wie Erlangt Man Brillante Negative"

This, the latest edition of this most helpful manual by Dr. G. Hauberrisser, has been greatly improved by the addition of much new and valuable matter pertinent to the subject which it so ably treats. Particularly valuable are the reproductions of seven different negatives of the same subject, showing the effect of over, under and correct exposure. The book is full of suggestions and advice, all in the most clear and understandable form, helped out where needed by illustrations that greatly assist. Even those who possess the best books on the subject will find much profit in reading this popular work in the German language. That there have been fifteen editions sold is ample evidence of its merit. The price is Marks 1.25, postage 30 phennigs. We will be pleased to order copies for our readers for forty cents. Published by Ed. Liesegang's Verlag M. Eger, Leipzig 20, Germany.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

About the Circulating Albums

The chief complaint from the State album directors is that the getting together of a sufficient number of suitable prints to make up a State album is a matter that necessitates an amount of correspondence out of all proportion to the results achieved. A few prints sent to the director of the State album in which the members should be represented, is a matter of but little time, cost, or trouble, and is a matter that should not be neglected. If the album director is kept fully supplied with prints, he can have no excuse for not getting out album after album, and then, in case he does not do so, your general secretary could demand that the State album directorship be turned over to some other member who would give it better attention. The State album director, instead of spending his time and postage in trying to induce the members to send prints, could use the same time and efforts in a more pleasing and profitable manner, a manner that would be of more benefit to all concerned. The State album director is absolutely helpless in the matter of getting out an album if the members in his State do not send him prints for that purpose. Kindly accept this as a special plea that you, each and every one, send your State album director a nice little bunch of your best pictures, thereby making his heart glad.

The Lantern Slide Division

Two or three of the members who have contributed slides to the Lantern Slide Division have written the general secretary, complaining they did so a number of months ago and as yet have not had the pleasure of seeing one of the circulating sets. A letter of inquiry to Mr. Moulthroppe brings a full and satisfactory explanation from him and his report shows that the several sets made up since the organization of the division in 1910 are all still in circulation in different parts of the country. The delay in getting the sets

over their respective route lists is due entirely to the negligence of a few of the members in the matter of forwarding them on to the next one on the list; some of these members even have been so remiss as to neglect prepayment of the express charges involved. The result is that the member to whom they are so sent will sometimes object to paying the charges both to and from his own point, and sometimes refuses to receive them for that reason. Both of these shortcomings necessitate a great deal of correspondence and some expense to Mr. Moulthroppe, neither of which the members have any right to exact from him. It is believed that Mr. Moulthroppe is spending considerable time and money in an effort to conduct this division; and those belonging thereto should realize that he is doing so, rather than take the position, as a few have done, and think that he is neglecting them and conducting the division as a means of securing for himself a supply of slides contributed by the members. About the only means of overcoming this unfortunate situation is for Mr. Moulthroppe to cut off from further route lists those members who delay the sets beyond a reasonable time and also those who violate the rule as to prepaying express charges in sending sets on to the next member on the route list.

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NOTE.—I. P. A. members, or applicants for

CAMERA CRAFT.

1. P. A. membership, desirous of joining the Post Card Division, should enclose three or more cards of their own make to the Director for approval. If they are of requisite quality a letter "X" will be placed after the member's number indicating membership in the Post Card Division. Always request a new notice in renewing your subscription. When desiring a reply from the Director, kindly enclose stamp. Address Charles M. Smythe, 1160 Detroit St., Denver, Colo.

George E. Moulthrop, Director Lantern Slide Division, Bristol, Conn.

Edward B. Cowles, Secretary Lantern Slide Division 11 Oak St., Bristol, Conn.

NEW MEMBERS

3696—Harry J. Hunt, 923 E. Market St., Akron Ohio, Class 2.

3697—W. F. McMullen, Midland, Mich.

3698—Ross S. Minor, Bussey, Iowa.
3¼x5½, of river, streets, buildings, and landscapes, for any good views. Post cards and prints. Class 1.

3699—Edna M. Hauser, 4226 25th St., San Francisco, Cal. Class 3.
3¼x5½, developing and printing-out papers, of scenery, some animals; in fact, have the usual variety of subjects; for foreign views and nature pictures, good scenery, and objects of general interest. Post cards only, no single weight papers wanted. Class 1.

3700—Allen Setterberg, R. F. D. No. 1, Gowrie, Iowa.

3701—Allen Setterberg, R. F. D. No. 1, Gowrie, Iowa.
3¼x5½, developing paper, of landscapes, and farm scenes. Will send good work and desire only good work in return. Post cards or prints. Class 1.

RENEWALS

947—Harry M. Biggin, 60 Ellsworth Ave., Sharon, Pa.

All sizes, mostly developing papers, variety of interesting subjects, including artistic figure studies in drapery; for the same and anything interesting or pretty. All prints sent or received on approval. Class 1.

1747—W. C. Cosby, 1242 N. Fourth St., Abilene, Texas.

3¼x5½, developing papers, of landscapes, water scenes, night views, sunsets and clouds; for the same or anything interesting. Post cards only. Class 1.

1777X—P. D. Booth, Wellsboro, Ind.

1x5 and post cards, desires to exchange children, flowers, fruit, on solio or developing paper; would like to correspond with members interested in gum printing and views of Mackinac Island with other members. Class 1.

2563X—Nathaniel Mortenson, 806 High St., Marquette, Mich. Class 2.

3911—Levi French, Oakdale, Cal.

Post cards of views of California and North Dakota; for anything of general interest. Class 1.

3212—G. L. Massey, Big Eddy, Ore.

2¼x4¼, 3¼x5¼, and 5x7, of landscapes, construction, etc.; for the same. Prints or post cards. Class 1.

3378—Felix Foreman, Jr., Box 63, Woodlake, Cal. Class 2.

3413—F. D. Campbell, M. D., High St., Coal Grove, Ohio, Class 2.

3415—Frank J. Duffy, Box 121, Portland Mills, Pa.

3¼x5½, developing papers, post cards, landscapes and portraits; for photos of curios, prominent buildings and outdoor life. Class 1.

3416—Leslie L. Long, 102 Chicago Boulevard, San Antonio, Texas.

3¼x4¼ contact, 6¼x8¼ enlargements, developing papers and carbon, of historic missions, forts, cathedrals, architectural details, nature studies, cactus, and small animals; for anything of interest. Good work only. Prints only. Class 1.

3432—Earl H. Lucas, Perrinton, Mich.
(Was Portland, Mich.)

3¼x5½, developing papers, of hunting, camping, and fishing scenes. Class 1.

3445—N. S. Fry, care Jas. Marshall & Co., Adelaide, South Australia.

4¼x3¼, 5¼x3¼, and 6¼x4¼, self-toning papers, of land and seascapes; for views of general interest. Class 1.

3657—Harry N. Krenkel, 725 G St., Sacramento, Cal.

3¼x5½ post cards, of Lake Tahoe, Yosemite Valley, California cities and scenery; for post cards of scenery, views on railroads, steamships, etc. No writing on cards, front or back; title on separate sheet of paper. Class 1.

CHANGES OF ADDRESS

1806—Robt. Ritchie, Sandilands, Man., Canada.
(Was Winnipeg, Canada.)

1924—Ernest J. Fox, Remlu, Pa.
(Was Sewell, N. J.)

2640—F. J. Soto, 3 Plazuela de San Luis, Puebla, Pue., Mexico. (Was Gozos 6.)

2718—John E. Doren, 6422 Colby St., Oakland, Cal.

(Was 126 Kittredge Apts., Berkeley, Cal.)

2867—Miner W. Tuttle, 198 Augustine St., Rochester, N. Y.

(Was Amherst, Mass.)

2939—Max H. Lorenz, care Shorter College, Rome, Ga.

(Was Rockmart, Ga.)

3114—J. G. Boyd, 839 Dearborn Ave., Chicago, Ill.

(Was St. Louis, Mo.)

3631—E. Felix Heberlein, 435 Putnam Ave., Detroit, Mich.

(Was 89 Hancock Ave. East.)

3655—S. W. Giere, Northfield, Minn.
(Was Sacred Heart, Minn.)

3698—Ross Miner, Granite, Okla.
(Was Bussey, Iowa.)

CLUB NEWS AND NOTES

A Joint Exhibition

The St. Louis Young Men's Christian Association and the Missouri Camera Club of St. Louis will hold a general exhibit of amateur photographic work for the city of St. Louis and vicinity during the months of November and December.

The November eleventh, twelfth and thirteenth this exhibit will be held in the parlors of the Central Y. M. C. A. of St. Louis. For the last two weeks in November and

the first two in December, the pictures will be on exhibition at the New Central Public Library.

There is no fee charged for the entrance of pictures, and for full particulars for entrance, address Art Department Central Y. M. C. A., St. Louis, Missouri.

very bulky one, one requiring about ten cents fitted with the bulb and tube release, but those desiring a shutter using the antinous release can be supplied as well.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported by William Wolff

L. L. Drossel, of the California Card Manufacturing Company, was up in Eureka with the writer the first week of September.

E. R. Freeman, of Eureka, is going to take up newspaper illustrating in Weaver-ville. Mrs. Freeman will continue the photographic business in Eureka.

Alexander Holmes and wife, of Eureka, have just returned from their vacation trip.

Trout, of Salinas, enjoyed his usual day and a half off this summer, taking his better half to Santa Cruz.

Joseph Thompson, of Gatlif & Thompson, Eureka, just returned from a hunting trip. He says he killed two deer, which I am inclined to believe, as I had some of the meat.

Guy Hess, of Eureka, now employs two assistants in his studio.

Seely Brothers, Arcata, report good business.

Fred Hartsook, of San Francisco, now owns nine studios in California. Look out for the trust buster, Fred.

Branching Out

It will interest our readers to learn that Max Meyer, 18 West Twenty-seventh Street, New York, who has been and is still direct importer and jobber of the Ernemann cameras, lenses and motion picture apparatus, has added to his line the Polygon camera, which is amongst the highest grade German cameras made. He has been selling this line quite some time, but never advertised them, because the orders have been coming in for them so fast that he could not meet the demand. These cameras are so satisfactory that they have sold by recommendation only, but so as to inform the general photographic public, who are looking for a camera that has every possible movement desired in a camera and thus make it a really many-sided camera, truly "polygon," he has decided to make it generally known

that he is the importer and jobber of the Polygon cameras.

These cameras can be had with the finest lenses that have ever been put on the American market. They may be fitted with eight element entirely cemented lenses from f-4.5 opening on, which transmit more light at f-6 than other well-known lenses at f-4.5; and being double anastigmats, and entirely symmetrical, they possess besides a great depth of focus, rendering needle-sharp images, thus permitting of very great enlargements. For interesting booklet with sample print and sample enlargement, write to Max Meyer, 18 West Twenty-seventh Street, New York, enclosing stamp.

Hirsch & Kaiser's New Catalogue

Just too late for mention in our last issue there came to hand a copy of the new catalogue issued by this enterprising local firm. Pacific Coast photographers, both professional and amateur, are too well acquainted with this compendium of photographic goods to need a description from us, further than the advice that it is up to the usual high standard with the usual improvement that each new issue shows. It is handsomely printed on good paper, a large number of the illustrations being made specially for the purpose. Furthermore, despite the fact that it is complete in every particular, offering a remarkably wide choice in every line of photographic goods, the firm still maintain their policy of listing only such goods as they have in stock and are able to ship promptly. Such of our readers as are located on the Pacific Coast will be supplied with a copy upon request. Address, Hirsch & Kaiser, 218 Post Street, San Francisco.

A Meritorious Utility

The attention of our readers is called to the small advertisement of the Dye Photo Tongs in the front advertising section of this issue. This is a carefully devised and well-made utility that will save many times

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its cost in the course of a year in spoiled prints, stained fingers and other annoyances. They cost but twenty cents each and every well-appointed dark-room should be supplied with several in order that the developer hypo bath and other solutions may each have its own pair. They can be obtained directly from the makers, the Photo Autopress Company, Minneapolis, Minnesota.

Snaps in the Shade

Some new hand cameras are being imported into this country; and, in addition to being very fine instruments, they are so equipped as to permit of snap-shots in the shade and at an hour of the morning or evening when the ordinary hand camera with its speed of one twenty-fifth of a second, particularly if the lens be other than an anastigmat, is unable to cope with the conditions. The worker knows the superiority of child and other portraits made in the shade of a building, and he also appreciates the advantage of being able to make landscapes at other hours than those during which the light is strong and flat on the scene. This new line is not only equipped with anastigmat lenses, but the shutter is specially adjusted to give the new speed of one-twelfth of a second, just the speed that permits the camera to be held in the hand while giving the longest possible exposure while yet stopping ordinary motion, just the exposure required for the advantages enumerated above. The line includes a wide variety of styles and sizes, and our readers will do well to put themselves into communication with the advertisers, the Pacific Camera Company, whose half-page announcement appears for the first time on another page of this issue.

Being Up-to-Date

There are untold numbers of you photographers who have adopted up-to-date, live methods and processes in your printing rooms, dark-rooms, and reception rooms, who still trust to luck to have good light in your operating rooms. Your operating department is really the backbone of your business (failure there rendering your other departments useless), and there is where improvements should begin.

A Victor Studio Flash Cabinet will make you absolutely independent of your skylight for the making of the very finest grade of

bust, full-length or group negatives. Any number of users of this cabinet testify to the truth of this, and the manufacturers, J. H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, guarantee it.

Get Your Ensign Catalogue

If you have not yet received a copy of the Ensign Catalogue, you should sent for one at once, as it lists and illustrates a complete line of the latest models of this efficient and well-constructed camera, ranging in style from the simple box form at two dollars and twenty-five cents, through a varied line of hand cameras to a high-grade Reflex equipment selling at two hundred and forty dollars. This line of cameras as well as the other Ensign products are appreciated by camera users throughout the world, and you should become acquainted therewith. Catalogues will be sent our readers upon application to G. Gennert, 24 East Thirteenth Street, New York; 230 South Wabash Street, Chicago, Illinois, or 682 Mission Street, San Francisco, California.

"Hints For Home Entertainment"

We have just received a copy of a handsome booklet bearing the above title, and one that we believe has a most complete line of suggestions for entertainment with an opaque projector that has ever been published. It is a booklet that will certainly interest a large proportion of our readers, particularly at this time when the long winter evenings are coming on, just the season when an equipment of this kind can be used to the best possible purpose. The booklet goes very thoroughly into different forms of simple entertainment which can be given with the assistance of the Radiopticans, and the suggestions are so simple and inviting that one will be sadly tempted to invest at once in this excellent piece of apparatus. Copies of this booklet will be furnished our readers upon request by the Radioptican manufacturers, H. C. White Company, 502 River Street, North Bennington, Vermont.

New Ilex Departure

We have just received a letter from the Ilex Optical Company, Rochester, New York, advising that, in accordance with their desire to please the trade by doing everything possible to add something better to their fine line of shutters, they have decided to make hereafter two styles of their shut-

NOTES AND COMMENT

ters, one using the antinous release, and the other using the ordinary bulb and tube. Shutters using the antinous release exclusively have been sold in Europe for several years by nearly all of the manufacturers thereof, and the Ilex people believe they are the first in this country to give the dealers and their customers this same convenience, asking that in ordering they be advised which form of release is desired. Orders in which the form of release is not specified will be filled with the bulb and tube release, but those desiring a shutter using the antinous release can be supplied as well.

A Comprehensive Catalogue

We have just received a copy of the new "Catalogue K" issued by the Northern Photo Supply Company, with stores at Fargo, North Dakota and Minneapolis, Minnesota. When we say that it has over three hundred pages crowded with illustrations and descriptions of photographic goods, our readers can understand that it must be quite comprehensive in its scope. We believe copies will be sent to such of our readers as are located within the territory tributary to the two stores the company maintains, but a book of this size, requiring seven cents postage, is a little too much to ask them to send to others. Application to either of the addresses above will have the attention of the firm.

Wright's New Catalogue

There has just reached us a copy of the fine new three hundred page catalogue issued by Wright's Photo Supplies, Racine, Wisconsin. Mr. Wright has been a continued advertiser in our pages for a number of years and during that time we have had numerous letters of commendation from our readers and not a single complaint, concerning his methods of taking care of their orders, either for photographic supplies or for photographic finishing, the latter being an important part of the business, particularly along mail-order lines. The catalogue is a very bulky one, one requiring about ten cents postage in addition to its cost of production. For that reason we would not like to suggest that readers write a post card asking for one just out of curiosity. A better plan would be to send him a roll of film for developing and printing, getting a sample of his work by so doing, and then ask him to send you one of the books. His prices for

developing and printing may be a little lower than you are paying, but he will return any difference with the order. The name and address given above is the same used in his advertisement and is sufficient.

AnSCO in the Northwest

It was only a couple of years ago that the Minneapolis branch of the AnSCO Company, foreseeing the growth of the business, moved into larger quarters; but the growth was under-estimated, so that it has been necessary to make a further move. It has leased a very large place in the Commercial Building, corner of First Avenue, North, and Third Street. Orders should be mailed to the new address so as to prevent delay.

New Prices and Some New Grades

We have just received a new price list showing the addition of some linen-surface Platora, made in two emulsions; soft, such as they have been supplying their professional customers, and a medium soft grade, one slightly stronger but not in any sense a contrasty working paper. In the Instanto line, they have added an extra hard grade that gives brilliant prints from quite flat and soft films or negatives, and this quality should recommend this new emulsion to the attention of amateurs and those doing amateur finishing. The new papers also include an Instanto Buff in both soft and hard grades. Our readers will do well to send for a copy of this new price list, and should they feel willing to accept our advice to that extent, they will do still better by enclosing twenty-five cents for the generous samples as suggested in the firm's advertisement in our last two issues. Address Photo Products Company, Department E, 6100 La Salle Street, Chicago, Illinois.

A New Camera

Now, between the rush seasons of the tourist and vacation photographer, is an excellent time to secure a photographic outfit that will give you better negatives than you can get with an ordinary camera or lens. It is also none too early to think of the most acceptable Christmas present for your relatives and best friends. Before committing yourself on either of these points, get the Goerz catalogue of cameras, lenses and binoculars and read it through. You may find just what you want in it; and anyhow, it's as interesting as an illustrated popular maga-

CAMERA CRAFT

me and as instructive as a text-book of photography.

The Goerz Company announces one new camera, not in the catalogue, for the fall trade—a $3\frac{1}{4} \times 5\frac{1}{2}$ size of the Taro Tenax. The price is sixty-four dollars with the Tenaxigmat and eighty-four dollars with the Dagor lens. This includes three single plate-holders in a neat leather wallet. A film pack adapter can be obtained at slight extra expense as in the case of all other Goerz cameras. If your dealer cannot give you the new catalogue, and all other information you desire, write the C. P. Goerz American Optical Company, 321½ East Thirty-fourth Street, New York City.

Are You Next?

That extraordinary trial offer of The Photo Products Co., Chicago, is continued in this issue. So many who have benefited by this liberal proposition are recommending Instanto to their friends that the manufacturers wish to give all a chance to try it with little expense. Sending three full dozens of postal cards prepaid for twenty-five cents looks like a losing game. So it would be were it not for the fact that the large majority follow with a trial order, and also become Instanto boosters—sort of an endless chain. Any of our readers who are already Instanto users who have not received the new price list showing the extra hard, buff, and linen surface grades, should request a copy at once. The list will be sent to anyone even if the trial offer is not accepted. Apply to the Photo Products Company, Department E., 6100 La Salle Street, Chicago, Illinois.

A Very Handsome Booklet

The new booklet on the Verito lens and its work is entitled to the above rather strong descriptive term. In addition to some very fine reproductions of a variety of photographic work by leading photographers all over the country, it contains the kind words of such men as Hammond, Kelly, Dr. Miller, Walter Burke, Weston, Geo. Phillips, Scott, and others, telling of the merits of the Verito lens. As our readers must have known, this lens is the one with which the best effects are so easily secured. It is the one that should have the attention of every photographer who has passed beyond the snap-shot stage. These lenses are low in price and yet worthy of

the commendation of such men as are mentioned above. We are therefore justified in urging each of our readers to send for a copy of the book, asking the Wollensak Optical Company, Rochester, New York, to send it along before the supply is exhausted.

Make Your Printing Profitable

The printing frame as ordinarily used for printing is as out of date and unsuited to the requirements of the present day as would be a pair of candle snuffers in a modern home. The candle snuffers were intended to be used in place of the fingers when candles were in vogue, and the printing frame answered its purpose admirably when printing was a matter of putting frames out on a roof and watching several of them while the paper slowly printed, with danger of rain or a fall always present. What the developing papers of today demand, if the photographer is to make a profit on his printing, is a simple and expeditious method of making absolutely uniform exposures in the most simple and unencumbered form of printer. The "Visible" Photo Printer is such a device, and as it is the invention of a practical printer and has had three years' successful use, its apparent advantages can be credited with being quite real. It is certainly well worth looking into and we would advise every one of our readers to write for a copy of the free booklet, "Printing by Electric Light," addressing "The Visible" Photo Printer Company, 310 Washington Street, Brooklyn, New York. Their advertisement appears in the front section this month.

A Color Corrected Double Anastigmat, the New Eurytar

During the spring of this year the Series IV Eurytar was subjected to a thorough reconstruction, it being deemed advisable to change the system to a three-glass one, chiefly out of consideration for the weight of the apparatus. The improved construction considerably diminishes this disadvantage; and, in consequence of excellent elimination of the chromatic and spheric aberrations and the other defects of view, uniform distribution of light over the entire plate was secured. A complete and varied stock of this new series has been received, and the American agents, W. J. Lafbury Company, are supplying their dealers with them as

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rapidly as possible. If your dealer cannot show you one, write directly to the W. J. Lafbury Company, 305 North Fifth Street, Chicago, Illinois, and they will send you full particulars.

A Fruitful Field

Many photographers entirely neglect such lines of work as home, store and factory interiors. There is a big field for this class of work in practically every city. Go out and get your share now. Take a box of Victor Flash Powder and a Victor Portable Flash Bag with you and you are prepared for anything. The powder possesses remarkable illuminating strength and makes but little smoke or report. They are made by James H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, Illinois.

Notes from the Illinois College

Lawrence G. Bowen, who has been taking a course in photography the past summer, has returned to his home at Kingston, Jamaica, where he will open an elaborate studio.

Frank Francis, who enrolled for a course in photography this month, had the distinction of having made the two most successful negatives of the recent removal and sinking of the famous battleship, Maine, at Havana. He sold the two negatives for five hundred and fifty dollars, which is a fair price, as negatives go. Mr. Francis has had a wide experience in view work, having traveled for several years in that business. He spent last winter making views in the South Sea Islands.

The photographic students are taking considerable interest in the moving-picture work which has been introduced in the course, and a number of local occurrences were recorded last month by the class. One of the favorite subjects was the pavers at work on several streets near the college.

The long and exciting struggle between the bowling teams of the Engravers and of the Photographers finally resulted in a victory for the wet plate boys.

William J. Wagner, 1909; Russell Hamilton, 1907, and Fred Lensink, 1911, all sent announcements of their marriage last month. Good work, boys; good work.

A very enjoyable dance, under the management of Fred Mahler, of the I. C. P., was given at Armory Hall last month for the benefit of the students and their friends.

Mr. Bissell has purchased a new seven-passenger touring car, which will be used in meeting new students at the trains.

Charles D. Gallagher, of Ely, Nevada, student of 1904 and later instructor and superintendent at the College, made us a pleasant visit the past month. Mr. Gallagher has the best equipped studio in either Nevada or Utah and reports business good.

Edward Hong returned to the College last month, finished his graduation work and secured his diploma, having spent the summer at his home in Chicago.

Ross New Telecentric Lens

The Ross new patent Telecentric lens for studio photography, in addition to being a rapid long-distance lens giving enlarged images at high speed, the seventeen-inch, f-5.4 is also an ideal, inexpensive portrait lens, suitable for 5x7 plates. It can be used at full aperture and is sufficiently rapid for all requirements. The long focus gives better perspective and insures the most pleasing results. The large side images obtainable with this lens, and the comparatively short camera extension required, appeal strongly to the professional photographer. With this lens the 5x7 plate is covered with a three-quarter portrait at twelve and one-half feet. The price is only ninety-five dollars and fifty cents. Full particulars of the American agents, George Murphy, Incorporated, 59 East Ninth Street, New York.

Something New in Catalogues

We received, just too late for mention in our last issue, a copy of the new "Ipsco" catalogue. Aside from the fact that it is most informative and interesting, it is unique in that it is no doubt the first catalogue describing a complete line of foreign cameras that has ever been printed in this country. It describes the full line of Ica cameras, some twenty-five or thirty in number, and should prove very interesting to the worker who desires to acquaint himself with the best offered by makers of high-grade cameras abroad. The American agents for this line advise that they will be more than glad to supply copies of this catalogue, free of cost, to any of our readers who may make application to them. Requests for copies should be addressed to the International Photo Sales Corporation, 235 Fifth Avenue, New York.



We Know, But We Don't Like To Tell

Fairlawn, New Burnside, Ill.,
CAMERA CRAFT, Sept. 8th, 1913.
San Francisco, Cal.

Dear Sirs:

What is the matter with the advertisers? Of course I refer to the advertisers of things photographic.

Let's see how their faults look to the fellow who is supposed to buy their wares—and who does so. Not the professional or the advanced amateur, but the beginner who looks to his photographic magazines for all his information.

If he will read the advertisements carefully month after month, he will learn that Ansco makes Ansco Film, Ansco Cameras, and Cyko Paper. Do they make anything besides these that he will some time need? Not so you could tell by their advertisement. And do they publish any booklets that would be a great deal of help to the beginner? Sure they do; but he might read the magazines (the photographic magazines) forever and never discover it. I found out about the two excellent booklets they issue from an advertisement in one of the "popular" magazines. Ever hear of their Noko paper? Yes, a fellow told me about it. It isn't so bad that they need to try to keep it quiet, either. Do the Ansco people make anything else? Yes, lots of things; but they are a secret. Just go on reading their ads of Cyko paper month after month until you actually get to hate it on that account.

Did you ever hear of Argo paper? Well, if you read the advertising pages of your photographic magazine, you will have very little chance to forget it. What else do the Defender people make? Why, they make Argo Soda. I know and can prove it because I saw it advertised in the September, 1910, number of CAMERA CRAFT. I feel just as though I had made an important discovery.

The Eastman people make about everything, but they don't want a mere amateur to know that. There are only a few things that they want him to know about. That simplifies photography, you know. Sometimes a fellow wants to experiment, though, and if he is willing to pay for it, why can't he buy what he wants? No reason in the

world why he can't—if he can find where to buy it.

Where does the beginner buy his supplies? In New York or San Francisco, probably, for they are the only places where the supply houses are enterprising enough to advertise. It takes almost two weeks to get an order from New York to me. Wouldn't I gladly buy my supplies in Chicago or Indianapolis or St. Louis if only I knew from whom to buy them? But goodness gracious! if they were to advertise, some one might send for their catalogues out of mere curiosity. If they were good catalogues, though, they might get him so interested that he would send an order. Guess they never thought of that.

I have before me CAMERA CRAFT for September, 1910, and the kind of advertising is very different in the two numbers. In the issue for 1910 there are ads of supply houses all over the country, while the 1913 issue has but few outside New York and San Francisco.

If Gennert, Murphy, Burke & James, and such houses, would every month carry even a small advertisement of some simple thing like mats, or some chemical—say a tube of blue print sensitizer, an improved stirring rod, or calendar mounts for the holidays, how long would it be until the amateur would get acquainted with them and the varied stocks they carry? Not long, I can assure you, and the money they would get would be the money that the amateur would never think of spending for things photographic otherwise.

Have you noticed that there is not a single advertisement of bromide paper in the August, 1913, issue of CAMERA CRAFT, though it is about time for the camera bug to be returning from his vacation with a lot of negatives that he wants to enlarge from.

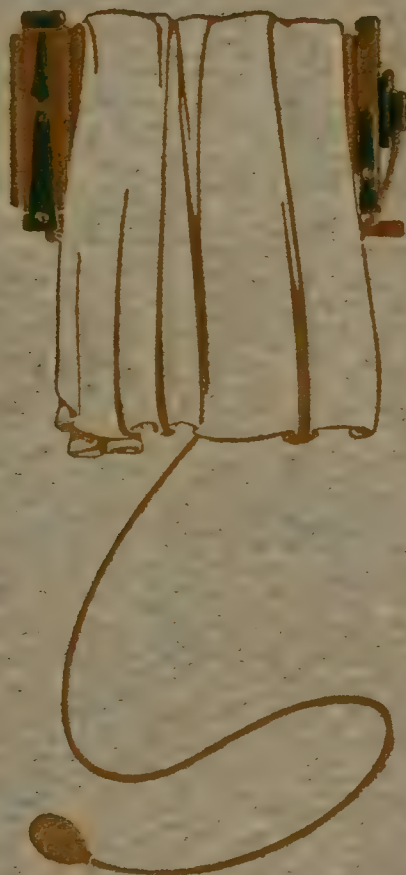
I could go on all night telling where I think the advertisers are at fault. Perhaps it makes but little difference if they don't suit me, but still I am one of the class they claim give them most of their business—the amateur. How many more are there in the same boat? I should just like to know about that.

Sincerely yours,

NORMAN W. CASPER.

SAN FRANCISCO
FREDERICK GERRATT

CAMERA CRAFT



SAN FRANCISCO
CALIFORNIA

The Ideal Printing Medium

The ideal photographic printing medium is one capable of approaching the result seen in a positive on glass or other translucent support when viewed by transparency.

A Cyko Print

is the nearest approach, and especially

Cyko Linen

Hence, the popularity of CYKO, and its large sale in all the markets of the world.

Send for the latest edition of
the Professional Cyko Pointer



Anscoc Company, Binghamton, N. Y.



ONE OF THE THREE PORTRAITS
WINNING P. A. P. N-W. TROPHY CUP
By R. C. NELSON, HASTINGS, NEBRASKA



CAMERA



CRAFT



A PHOTOGRAPHIC MONTHLY

FAYETTE J. CLUTE, Editor and Proprietor

CALL BUILDING

SAN FRANCISCO

CALIFORNIA

VOL. XX

NOVEMBER, 1913

No. 11

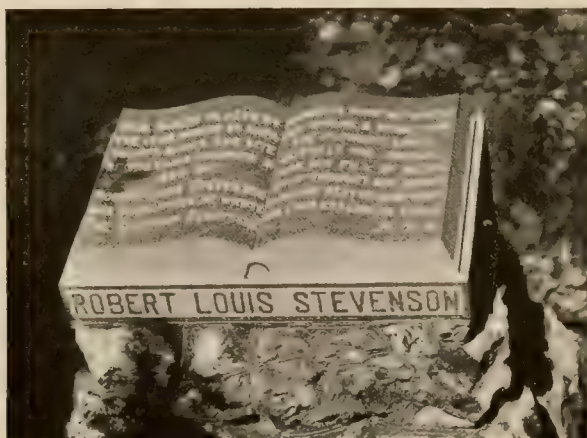
Good Post Cards Still Profitable

By I. C. Adams



With Illustrations by the Author

The average small town professional and even his amateur brother of the same location is inclined to think that post cards are not worth while, mainly because the best views are offered in the form of cheap lithographed or other process cards by the dealers in his town. Possibly he has made an effort to compete with these low-priced cards by trying to see how cheaply he could turn out the photographic kind. This last is almost sure to prove unprofitable. The right way to go about the work is to secure a few good negatives as a ground-work and then add to them from time to time as opportunity presents, always taking pains to turn out only the best possible work, and charging such a price that a fair profit will result. The views should be, as far as possible, those of scenes easily recognized, and they should be made from a point of view which does not sacrifice any of this desirable quality, even if a more artistic composition could be secured from a different camera location. The



THE ROBERT LOUIS STEVENSON TABLET

CAMERA CRAFT

cards should be well printed, should have some snap and sparkle to set them off from the dull-looking reproductions, and they should be dried on a cloth-covered drum so as to lie flat and remain so after being placed on display.

Of course, the sale of good cards at a price that pays a good profit will not be so great as that of cheap cards rushed out at the lowest possible price, but the actual profit on the sales made will be greater and the maker of the cards will do a much less amount of work for that profit. If the cards cost eleven dollars to produce and are sold for twelve and one-half dollars the thousand, the photographer has made one and one-half dollars on his work of producing a thousand. On the other hand, even should the taking of more care cause the cards to cost twelve dollars and he sells the thousand for fifteen dollars, the work of producing five hundred cards pays the same profit as did the production of the former thousand. And my experience is that the higher-priced card will sell more than half as well as the lower-priced one, even if the difference in price be still greater. I have tried both plans and I find that there is good money in the cards at twenty dollars a thousand if one watches sales closely enough to see that dealers do not neglect making payment for cards left with them on consignment and that they do not allow their stock to become dirty and soiled. Cards at this higher figure can be sold for five cents each, or three for ten cents, with a handsome profit, and one will be surprised at the number that are sold to people who would really be expected to buy the cheaper colored cards.

Another good thing about the post-card business is the fact that one can do most of the work in spare time when nothing else is demanding attention. Once the photographer has stocked a few of the local dealers and watched their sales closely enough to find out which subjects are the best sellers, he can anticipate the future demand very closely. This makes the production of the cards an excellent "filler" for periods that would otherwise be wasted time through not being occupied with other work.

Herewith are reproduced a few of the cards that I have found to sell best in my own locality. They were nearly all taken along one much-traveled road through the district, the road from Calistoga to St. Helena, at the head of our beautiful Napa Valley. Practically every one of these views, as well as numberless others, can be viewed from the electric road that runs between the two towns. I do not try to keep others from using their own cameras in making the same views; in fact, I always help them to take the same or advise them how and when to do so. I have long contemplated the getting out of a small circular for dealers to hand out to the visitors and others who may drop in to inspect their stock of post cards. I sincerely believe that the more a certain beauty spot is photographed and the greater the number of photographs that are distributed, the larger will be the sale of easily available, good view cards showing the same scene. Following is the proposed text of this circular that I have intended getting printed long ere this:

To one who has the camera craze and is desirous of taking a short trip that will present views admirably adapted to the pages of his album, let me suggest a ride on the electric cars running up Napa Valley to Calistoga, by way of Vallejo Junction, a trip costing but two dollars and sixty-five cents. The road

GOOD POST CARDS STILL PROFITABLE



ONE OF THE HOT SULPHUR SPRINGS
MT. ST. HELENA FROM HOT SPRINGS
THE WINDING ROAD BELOW CALISTOGA

THE PALM ROW AT THE HOT SPRINGS
THE STONE BRIDGE ON ST. HELENA ROAD
THE OLD MILL ERECTED IN '46 OR '47

passes the entrance to the State Asylum for the Insane at Napa City, and the beauties of the valley may be better seen from these cars than from any other like avenue of travel. Mt. St. Helena stands at the head of this beautiful valley, and a trip up its rugged trails is well worth the effort for the magnificent view from the summit.

Northeast of Calistoga there are enormous hot springs of sulphur water, and on cool mornings the steam may be seen rising from them in clouds. One of these smaller springs is shown in the picture herewith. The view showing the stately palms is what is called "Palm Row," the houses being rented to people who come to these springs to take the hot mud baths or drink the hot sulphur water. For, let it be known, we have here as fine medical springs as there are in any part of the world. From a small hill near these springs was taken the accompanying picture of Mt. St. Helena. The road scene showing a stone bridge was taken just below Calistoga and the other winding road is a scene but a few hundred yards above. The old mill, built in 1846 or 1847, is one of the beauty spots of the valley.

A Brief Talk on Lenses

By Felix Raymer



EDITOR'S NOTE.—The following article is really the meat of one of Professor Raymer's popular lectures, of course somewhat modified to fit the printed page. The subject is treated in the inimitable style that has made the author such a favorite with photographic gatherings throughout the country, although a style that may perhaps leave his work open to some slight criticism from the stickler after scientific exactness. However, we feel sure that the article is one that will find favor in the eyes of many of our readers; and, if more technical and exact information is desired there are several works on photographic optics that are easily obtainable at a low price. To use the author's own words: "I receive so many letters asking 'which lens is fastest,' 'which has the greatest angle,' 'which has the greatest depth of focus,' 'what is the difference between a group lens and a portrait one,' and such like, that I think something in 'common United States talk' might be of service to many, amateur and professional alike."



PORTRAIT OF THE AUTHOR

Very often an operator is found whose knowledge of lenses does not extend beyond the belief that the one he is using is "as quick as chain lightning," and "cuts deeper than any lens that ever was." The reason for his belief in these things is founded on the fact that the photographer from whom he bought the business or for whom he is working told him so. As an actual fact, the lens he is using is no faster, nor does it cut any deeper than any or all other lenses of a like equivalent focus and working aperture.

Equivalent focus or focal length is one and the same, the terms being used interchangeably. The focal length of a lens of the doublet type is, roughly speaking, the distance between its diaphragm

and the ground glass when the lens is focused on some distance object. The greater the focal length of a lens, the longer operating room required in which to use it, for the greater the focal length the farther from the subject the

A BRIEF TALK ON LENSES

camera must be placed in order to get an image of a certain size. For example, if a twelve-inch lens is used and the image is three inches long, with a twenty-four-inch lens at the same distance, the image would be six inches long. Therefore, if a head one inch in length is wanted, a twelve-inch lens would have to be about ten feet from the subject, while to get the same length head with a twenty-four-inch lens would require that the camera be about twenty feet from the subject. From this it can be seen that, owing to the shortness of the operating room, the portrait operator must frequently use a lens of shorter focus than he would otherwise.

The longer the focal length of the lens, the better the perspective and less probability there is of distortion due to those parts of the subject nearest the camera being rendered too large. The shorter the focal length, the higher the camera should be stationed, particularly in architectural work where straight lines predominate and where objects of the same size are situated at different distances. Also, the shorter the focal length the greater the so-called depth of focus.

Depth of focus, or, correctly speaking, depth of field, is the property of a lens to render sharply the image of objects situated at different distances from it. Thus, if we have three objects placed at three different distances, and focus on the intermediate one, find that the nearest and the furthest just come into focus, the depth of field, or so-called depth of focus of the lens, is represented by the distance between the first object and the third. Of two lenses having different focal lengths yet used with diaphragms of the same f value, the one of shorter focus will have greater depth. On the other hand, if two lenses be of the same focus, but used with different diaphragms, the one with the smaller diaphragm will have the greater depth. Obviously, two lenses of the same focal length, used with the same diaphragm or working aperture, will have the same depth of focus. For example, any two lenses working at $f-6.8$ having a focal length of twelve inches will have exactly the same depth of focus. If the making of groups and other classes of work in which figures or like objects are at different distances from the lens, a rather short focus lens should be used. A longer focus lens requires a smaller diaphragm to insure the necessary distribution of focus, and that means longer exposure. On the other hand, a lens of too short a focus is liable to cause distortion, by increasing the apparent size of the figures nearest the camera. As an actual fact, there is no such thing as depth of focus, it being utterly impossible to make two or more objects, situated at different distances from the lens, perfectly sharp at the same time with any given position of the ground glass. But we can secure sufficient sharpness for all practical purposes over considerable distances both in front of and behind the point actually sharp.

Back focus is a term that does not interest the user of lens to any great extent, except as it tells him the bellows extension his camera must have, a draw greater than the back focus of the lens. The back focus of a lens is the distance between its rear surface and the ground glass when focused on a near object. The term should not be confused with focal length.

Spherical aberration is a term used to describe the inability of a lens to

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bring to an exact point of focus both the central and the marginal rays of the same pencil of light. The results are indistinct, diffused image points, more in the nature of discs overlapping each other, causing more or less objectionable diffusion of the image. Perfect definition with a lens having this fault can only be secured by diaphragming down sufficient to eliminate the outside or marginal rays. This of course necessitates a longer exposure. Such a lens, if used on groups, will render the central figures sharp, while those at the sides or near the edges of the plate would be out of focus unless a smaller diaphragm be used to "pull them in," as the photographer calls it. Lenses usually referred to as portrait lenses, working at f-4 and f-5, have this fault to a greater degree than other and smaller lenses. In the case of the portrait lens, this shortcoming is thought by many good operators to be not a fault but a decided merit; their claims being that by it they can secure a concentration of focus on certain parts of the subject and a diffusion of focus on certain other parts, such treatment being conducive to a perfect rendering of roundness and perspective. Strictly speaking, the term refers only to the direct rays; when oblique rays are considered, the fault is known as zonal aberration or coma.

Chromatic aberration describes a fault occasioned by the splitting of the image-forming rays of white light into several color rays, such as red, orange, yellow, green, blue, indigo and violet, some colors coming to a focus before or behind the visual image on the ground glass. The effect is an image on the plate that is out of focus, even though the greatest care be exercised in focusing before exposure. The reason is that the plate is not sensitive to the rays forming the visual image that is focused, but when the plate is exposed the chemical color rays form the image that is later developed as out of focus. By "visual rays" we mean those rays that our eyes and the lens, which is much the same as the eye, are sensitive to, or "see" in our subject. The chemical rays, on the other hand, are those that the plate "sees." We know that the red, orange, yellow and green do not affect the plate, or do so to such a trifling degree that they appear as a black or extremely dark. On the other hand, blue, indigo and violet affect it to so great a degree that they appear as white. When a lens fails to record all of these color rays at one point of focus, it is said to give chromatic aberration.

Curvature of field is inherent in all lenses except those of the anastigmat class. This term means that the focal plane is not a plane, but is "cupped" or curved like the inside of a hemisphere, so that to secure a sharply defined image of a flat object the plate would have to be shaped like a saucer. It is a serious fault in a lens used for groups and copying, but it can be lessened by the use of a diaphragm.

Marginal or curvilinear distortion is due to the difference in thickness between the edges and the center of the lens, and is shown in the inability of the instrument to reproduce straight lines in the subject as straight lines in the image on the plate. Nearly all single lenses have this fault, its degree varying according to the position of the diaphragm. When the diaphragm is in front of the lens, the marginal lines of the image curve inward at their middle; but if the diaphragm is behind the lens, these lines curve outward at that point.

A BRIEF TALK ON LENSES



A HOME PORTRAIT

By FELIX RAYMER

This renders single lenses useless where straight lines play an important part, as in architectural work. By combining two of these lenses and placing the diaphragm half-way between them, one offsets the other and the rectilinear lens is produced. Such a lens is also known as a doublet and it will reproduce straight lines as such.

Astigmatism is the inability of a lens to render horizontal and vertical lines sharply at the same time when such lines occur on the margin of the plate or are formed by the rays of light passing obliquely through the lens. To give the suspected lens a "try out," draw two sets of lines across a white card, one extending horizontally and the other crossing them vertically. Focus this sharply in the center of the ground glass and then move the camera slowly to one side, causing the image to slide across the ground glass. If the lens has astigmatism, one or the other series of lines will become blurred. Thus we see that astigmatism in a lens prevents sharp definition in the marginal portions of a picture and lessens the usefulness of such an instrument for architectural work, except as it be diaphragmed down considerably. The reducing of exposure is one of the greatest claims made for the anastigmat, it having received such a high degree of correction that the five or six errors or aberrations are eliminated, thus making it possible to cover sharply a greater angle of surface at a larger working aperture; and by so doing securing the speed claimed for it.

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Speed or f value refers to the time required for the exposure and is dependent entirely upon the working aperture. Thus an f -4 lens is faster than one working at f -5. The rating of f -4 and f -5, as given a lens in the catalogue, means that the lens works, when full open, at one-fourth or one-fifth, as the case may be, of its focal length. To ascertain this rating of a lens, divide its focal length by the effective diameter of its largest stop and the result will be its speed or largest f value. Thus, if we have a sixteen-inch lens whose largest opening has a diameter of four inches, its speed or working aperture will be f -4. Speed is a very desirable quality at all times; and, in certain classes of work, such as moving objects, is an essential. But one point must be carefully borne in mind, and that is that great speed and great depth of focus cannot be obtained at the same time. The laws of optics are such that these two cannot exist together in the same degree. If one wants extreme speed, great depth of focus must be sacrificed. If great depth of focus is wanted, extreme speed cannot be had. Thus a lens especially suited to snap-shot work is only adapted to groups or architectural work when it is diaphragmed down, and of course speed is then lost. Lenses of the same working aperture or diaphragm number have exactly the same speed, and if of the same focal length, the same depth of focus as well.

The angle of view taken in by a lens is determined by its focal length in connection with the size of the plate on which it is used. Lenses of normal angle have, as a rule, a focal length about equal to the diagonal of the plate they are listed to cover. Thus an 8x10 lens should have a focal length of at least twelve inches. What are known as wide-angle lenses have a focal length of somewhat less than the long way of the plate. If a lens has a focal length equal to half the length of the plate, it has an angle of ninety degrees. For ordinary view work, an angle of about sixty degrees is considered suitable. A wide-angle lens is no longer a wide-angle one when a smaller plate is used than the one it is listed for, and a medium wide-angle lens can sometimes be used as a wide-angle lens on a larger plate if it will cut the larger size when well diaphragmed down, as some of them will. A wide-angle lens, having a rather short focal length, demands the use of small diaphragms and of course an increase of exposure. A 5x7 lens, if stopped down to the required degree, will frequently become a good 8x10 wide angle. Another point worth mentioning is that all lenses of the same focal length will take in the same amount of view on the same size of plate from the same standpoint.

Portrait lenses are so constructed that nearly everything is sacrificed for speed; and that is one reason why sharp definition is achieved by them only within a very limited field. Such lenses have but very little depth of focus when used at full opening, due to their working at such large openings as f -5, f -4, and larger. The larger the working aperture, in proportion to the focal length, the more light they admit, and of course that means the greater the speed. If such a lens is to be used in making groups, it must be diaphragmed down so as to increase the depth of focus and the sharpness over the entire surface of the plate. The anastigmat portrait lenses are designed for use as an all-around lens in the studio, doing away with the necessity of diaphragm

A PHOTOGRAPHIC CABINET

to a great extent by reason of their correction for curvature of field and other faults. They being lenses with a flat field, the outside figures of a group, or those coming on the edge of the plate, come into focus at the same time as the center figures. These lenses are usually fitted with a diffusing attachment for the purpose of softening the focus on single figures and large heads, thus securing the roundness and gradation so highly esteemed by many good operators.

The diaphragm or stop is used for the purpose of cutting out the marginal rays of light. They are numbered to express the relationship existing between their effective diameter and the focal length of the lens. The series of diaphragms start with the largest aperture at which the lens works and is so arranged that each succeeding smaller diaphragm requires twice the exposure of the preceding larger one. Thus, if a lens at f-4 requires two seconds' exposure, at f-5.6 it will require four seconds, and at f-8 it will require eight seconds, and so on.

"If there is that in a man's nature which demands the best and will take nothing less, and he does not demoralize this standard by the habit of deterioration in everything he does, he will achieve distinction in some line if he has the persistence and determination to follow his ideal.

"But if he is satisfied with the cheap and shoddy, the botched and slovenly, if he is not particular about quality in his work, or in his environment, or personal habits, then he must expect to take second place; to fall into the rear of the procession."—THE PRINTING ART.



A Photographic Cabinet

By L. E. Whitford



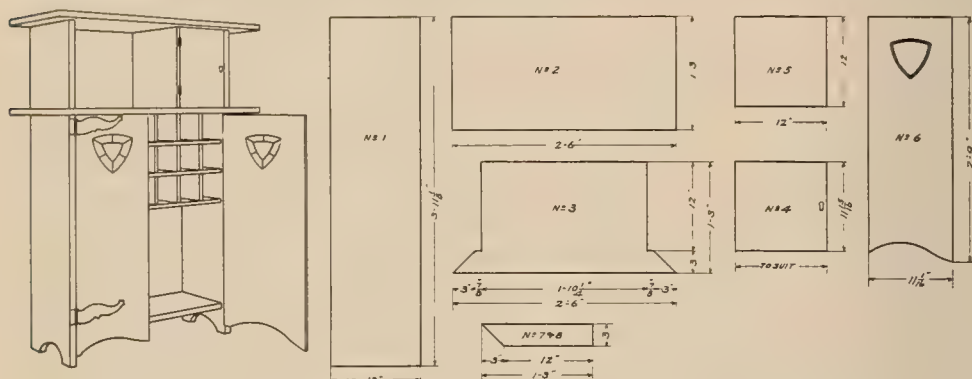
For the benefit of those amateurs who, like myself, are interested in utilities that they can manufacture, I am writing this description of a photographer's cabinet. It is one that will prove convenient and useful to those who will take the time and incur the small expense necessary in making it.

The lower part of the cabinet consists of a closet divided into compartments, the lowest one being sufficiently large to contain the bottles of developer and hypo, the graduate glasses, etc., with side racks for trays. Above this are pigeon holes the size of the negative which the photographer makes; each compartment marked alphabetically so that one's negatives may be assorted according to subject, making them easy of access. The upper part consists of a small space for albums and text books, and a like compartment closed with a door fitted with a lock, in which can be kept fresh plates and printing paper. The

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lower part closes with two doors, each of which is decorated with a design in stained glass, or an imitation of it. These imitations may be obtained from the Art Crafts of Milton, Massachusetts, who produce some beautiful designs. Upon application they will furnish, at a reasonable price, any desired monogram, initial or design.

To make: Saw out two pieces like No. 1, to form the two sides. Then cut No. 2 and fasten it with six screws to the top of these side-pieces with six screws, first gluing it, leaving an overhang of three inches at the front and ends, the



back being flush. Cut No. 3 as outlined in the diagram and screw into place inside the cabinet, one foot below the top. Notice carefully the shape of No. 3 and cut Nos. 7 and 8 to fit neatly when placed as shown by the dotted lines at the ends of No. 3 in the diagram. Cut No. 5 and place between Nos. 2 and 3 to form the closet, No. 4 being the door, which last can be longer or shorter according to the desired width of the closet.

Cut a board to form the bottom, this resting on cleats held with screws inserted through the sides from without. For appearance sake, sink these screws deep enough to allow of filling the holes with pieces half-inch doweling that are allowed to protrude about one-half inch from the outside; or, brass screws may be used, having their heads flush. Saw two pieces like No. 6 for the doors, and if glass windows are desired, mortise places for them, leaving sufficient edge of wood to hold them in place by puttying. Racks and pigeon holes for the interior may be made any size to suit the builder, depending upon the dimensions of his plates, trays, etc. For the back, half-inch oak may be used, and for the pigeon holes and remainder seven-eighths inch oak or any other wood preferred. In all about thirty-five running feet, one foot wide, are required. Stain to suit taste, or wax and polish. A good plan is to give the cabinet the desired stain, a coat of shellac, two coats of good varnish and then rub down with fine powdered pumice stone. The doors are fitted with brass knobs and hung with fancy brass hinges.

"It often happens that the uglier a being is in nature, the more beautiful it becomes in art. There is nothing ugly in art except that which is without character; that is to say, that which offers no outer or inner truth."—RODIN.



The Pyro-Ammonia Developer

By L. C. Bishop



With Illustrations by the Author

It is my firm conviction that too many of us have lost sight of the many advantages possessed by the pyro-ammonia developer that was so popular with many of the best professional photographers some years ago, before the introduction of the numerous new developers made up from coal tar derivative. It is an accepted fact that any effort made to control the effect of over or under-exposure in development is somewhat useless unless the nature of the exposure, whether over or under, is known before the developer is poured on, so that alterations in its composition can be made before development begins. This difficulty is, in a large degree, due to the fact that the alkalis generally used, such as carbonate of soda and of potash, make it possible to alter the action but slightly, once the emulsion has been saturated with the solution first applied. If a solution be poured on that contains a very small amount of alkali, the emulsion becomes charged with this weakened solution and it is practically impossible to replace this saturation with a solution more alkaline in composition. The same holds good with a plate that has been subjected to a developer that is strong in alkali. Some reduction of the alkali can be achieved by washing the partially developed negative, but this requires a longer time than is generally available when dealing with the over-exposure that requires this diminution of the alkali. Owing to the penetrating as well as volatile character of ammonia, a developer in which it is employed as the alkali presents these difficulties to a much lesser extent; and, at the same time, such a developer permits the worker to alter the composition of the solution, while in use, and with the minimum amount of delay in securing the desired effect.

My own method of using pyro-ammonia is best described by taking an example, let us say an 8x10 plate. To develop this, I take six ounces of water, to this add one ounce of a one in sixteen pyro solution and pour it into the developing tray. In the graduate I place another six ounces of water and add one-half ounce of ammonia and one-half ounce of sulphite of a soda solution that tests seventy degrees on the ordinary hydrometer. I also add one-half ounce of a twenty per cent solution of bromide of potassium. This remains in the graduate while the plate is first immersed in the pyro solution already in the tray. The tray is rocked a few times, the plate raised, one or two ounces of the accelerating solution from the graduate added, the tray rocked a few times and then the plate allowed to fall back into the solution. If the plate has been over-exposed, it will begin to develop in a few seconds, the time



AN UNRETOUCHED OUTDOOR PORTRAIT

elapsing depending upon the degree of over-exposure. Should this beginning to develop occur within fifteen seconds of the addition of the accelerator, no more is necessary and the plate is allowed to develop fully in that solution. In case development does not begin until the expiration of fifteen or twenty seconds, I add two or three more ounces of the accelerator; and then, if there is no appearance of the image after another fifteen or twenty seconds, still more accelerator is added. This method of working keeps results under

control, even when the correctness of the exposure is not known. When it is known that the plate is over-exposed, it is better to put the bromide in the pyro solution instead of in the accelerator. In case of known over-exposure, it is also best to allow the plate to soak in the pyro and bromide solution several minutes before beginning to add the accelerator, which, of course, should be added very slowly and the additions discontinued as soon as the image starts to appear.

THE PYRO-AMMONIA DEVELOPER

Where it is known that the exposure has been rather short, the entire amount of accelerator is added to the developer in the tray before the plate is put in, and even in such cases the bromide solution must not be omitted. When it is discovered that a plate having an unknown exposure is really an under-timed one through its failure to start development by the tentative method first described, the repeated addition of accelerator until its entire amount has been added, will only lengthen the time of development through the delay occasioned by not applying the entire amount at the start. The quality of the resultant negative will be practically the same, a result which is not obtainable by the same tentative method when using other alkalis.

One will find that, with this developer, some brands of plates will give

harder or softer negatives than others, just as they will with any other developer. This peculiarity can be easily regulated with the pyro - ammonia developer by reducing the amount of the pyro used in the above example to three-fourths of an ounce, in case the negatives are too hard, or by increasing the pyro solution to one and one-fourth ounces or more if the negatives are found to be usually too soft. In addition to this it is necessary to reduce or



PORTRAIT MADE IN SUNLIGHT, UNRETOUCHED

increase the amount of the pyro solution in accordance with the temperature. I frequently, in hot summer weather, use as little as one-half ounce of the

pyro solution, and in winter when the dark-room is quite chilly, increase the amount to one and one-fourth ounces. Negatives produced by this developer are of unusually good quality because the gradations are so well balanced. With this developer one can obtain everything that the plate is capable of giving and do it without the danger of blocking up the high lights or running them together. The negatives are of excellent color and are of such a character that good prints on practically any kind of paper can be obtained from them. The two illustrations herewith are both from negatives made outdoors and over-timed to such an extent that duplicate negatives given the same exposure were hopeless as printers after being given the usual tank development. Developed as they were with pyro ammonia, they produced negatives which brought first-class orders, while they would have afforded only discards if developed in the usual way as normal exposures.

Hard Work Necessary

It makes very little difference what you do, so long as you do it with intensity and enthusiasm. You must work hard, think hard, love hard. Make up your mind that your whole life will be a struggle, a struggle against weakness and temptation, against sickness and misery, against shams and falseness of all sorts. Every time you allow yourself to be beaten, every time you fail to accomplish the thing you set out to do, another step has been taken toward that bourne where the incompetent wither and shrivel up. All life, as far as we know, means strife.—WHITING.



A QUIET COUNTRY ROADWAY
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By GEO. H. WEBB

Photographing Children

By G. Avery Walter



With Illustrations by the Author

Perhaps one of the most difficult classes of subjects attempted by the photographic amateur, perhaps the most exacting in the matter of making pictures, is children. Probably no other class of subjects attempted by beginners has been the cause of so many blurred pictures and spoiled plates. The operator believes that in making the exposure he has secured a pleasing expression, but upon developing the plate he finds that a hand moved, the eyes wandered, or some similar catastrophe has spoiled an otherwise excellent picture and the whole procedure must be gone over again with hopes on the part of the photographer that better results may reward his efforts. Yet after a successful picture has been produced, how much real cause for elation! A good child picture not infrequently becomes a lifelong treasure to the parents.

The greatest difficulty confronting the worker who would photograph children is that of keeping them quiet during the exposure. The best way to overcome this difficulty is to get the child so absorbed in something interesting that it forgets, for the moment, the presence of the camera. The result is then a picture of the child at play, a picture far more valuable than a mere portrait.



PREPARING DOLLIES FOR BED



THAT HUNGRY BOY

THE BEDTIME HOUR

Had the children in "Preparing Dollies for Bed" been interested in the camera instead of the dollies, the picture would have lacked much of its present charm.

The exposure must necessarily be as short as possible, and for that reason fast plates are necessary and a fast lens is desirable. However, good results may be obtained, even with cheap fixed-focus cameras, by working out of doors or by using flashlight. By out of doors I do not mean in the direct sunlight. It is surprising the number of amateurs who think that they can only take pictures in the sun, and this belief causes their results to be far from pleasing. Many of my best pictures were taken with my Conley Magazine Camera, the subjects caught in the shade, out of doors, yet in a good light.

By using flashlight, the handicap of a slow-working lens may be overcome by employing an extra amount of powder, the picture still being made almost instantaneously. Care should be taken that too much powder is not used, as the shadow will throw the subject in rather bold relief unless a screen of white cloth is placed in front of the flash to diffuse the light. "Preparing Dollies for Bed" was taken without such a screen, but it would have been more pleasing had one been used. The "Bed-time Hour" was also taken without the screen.

PHOTOGRAPHING CHILDREN

hung in front of the flash, but the correct amount of powder being used the shadows are less conspicuous. "The Baby" was taken with a screen placed before the flash and for that reason is a better result. A side reflector consisting of a white sheet should be hung up on the side opposite the flash to give more detail to the shadowed side of the face, except in cases where the walls are white and the sitter is posed so that one of them forms a reflector. The powder should be so placed that the light will fall on the subject from one side and at an angle of forty-five degrees. If the flash is located too much to the front, the result will be a flat lighting.

The background is especially important in pictures of children and should always harmonize with the subject. When working out of doors, evergreens or bushes, particularly if they are in shade, make a splendid and harmonious background when put slightly out of focus. Inside the house, lace curtains or portieres, also kept slightly out of focus, make excellent backgrounds. The pattern of wall-paper is nearly always too pronounced, drawing the attention from the subject too insistently for the best results. "The Baby" would have been better had the design in the curtain been less obtrusive. It attracts the attention from the subject.

It often happens that the amateur is called upon to photograph children that are strangers to him and who are therefore quite naturally timid. However, he still has a great advantage over the professional, as he meets his little subjects in their own home and amid familiar surroundings where this timidity is more



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easily dispelled. I find that the best method of overcoming this natural timidity is to apparently take but little notice of the child at first, allowing him, if possible, to make the first advances. I show him the image of his mother or sister on the ground glass, or some other interesting thing about the camera. When this is not done and the lens pointed at the child without his first knowing something of the nature of the instrument, he is naturally inclined to display some fear.

Quite often a good expression is lost by the parent or some other "well wisher" speaking to the child just as the exposure is about to be made. This may be avoided, as in the picture "Franklin," by asking the parent to stand well to the side where the attention of the subject is desired directed. Another disadvantage attending the presence of friends and relations lies in their universal desire to have little Johnny or his sister looking as neat and prim as possible. While my picture of "That Hungry Boy" is an exceptionally flagrant violation of the parental rule governing picture taking, it is a good example of what one should really try to get occasionally in the child-portraiture line.

And lastly, the amateur should not begrudge the waste of a few exposures in making this class of work, as a good portrait of a child is worth many plates

A word that is frequently used by artists is "tight." And because it illustrates the meaning of impressionism it is worth explaining. A painting in which the lines of outline are hard and well defined is called "tight." A tightly painted picture is a bad picture because it is false. When you look at a vase of flowers you do not see each petal and bud clearly outlined. You see only a more or less vague mass of color. A hastily brushed-in picture, with no effort at faithful reproduction, will actually reproduce what your eye sees much better than a carefully worked out drawing, minutely colored. The eye, in a word, does not study, it glimpses. It does not acquire facts; it acquires impressions.—HOWARD VINCENT O'BRIEN.





The Photographer as a Business Man

By Harold Tager



EDITOR'S NOTE.—This brief article by Mr. Tager should have the attention of our readers, and particularly that portion thereof that is following photography as an avocation. While but few will find it convenient to attend one of the resident schools mentioned, there is still no excuse for neglecting so important a matter. The Alexander Hamilton Institute of New York, whose advertisement appears so timely in this issue, offers a reading course of vital interest to every business man, a course that is being followed by thousands of business heads wanting exact information on business subjects and ambitious young men desirous of increasing their efficiency. A request made to the Secretary, Alexander Hamilton Institute, Astor Place, New York City, will bring details of the work that is offered.

Competition is at its height. Large businesses are combining with other businesses, both large and small, in all fields, or are buying and absorbing them completely. Every business, the photography business not excepted, is affected.

But a much greater number of businesses, a thousand times greater, have been forced into the bankruptcy courts, there to recite their oft-repeated, pitiful tales of failure. Business enterprises upon a sound basis five or ten years ago, and to all appearances in a flourishing condition, have been caught by business storms within the last few years and swallowed up in the maelstrom of the business seas.

To what cause shall we attribute this state of affairs? What is the underlying reason for the complete failure, as statistics compiled by the Bradstreet and Dun commercial agencies show, of over seventy thousand business concerns during the last five years in the United States? There is more than one reason. The chief and underlying one, however, the one that has been the direct cause of ninety per cent of these business failures, is inefficient business management. There have been more millions of dollars lost through inefficient management than there has been through any other reason.

And what has been the cause of this inefficient management, the reason for this large number of business wreckages? It has been nothing more than ignorance, the lack of knowledge on the part of business men of the underlying principles of the correct conduct of business.

Efficiency is the watchword of the day. The word and all it implies is being echoed through the funnels of smoke-stacks of the great manufacturing plants of the country; through the grinding of the locomotive wheels of the great railroads of the country, and through the offices of countless thousands of financial, trading and other businesses. The men who direct the destinies of these businesses are big men, men of the forty-four calibre type. They know that efficiency means knowing business in all its phases.

Frank A. Vanderlip, president of the biggest bank in the country, the National City Bank of New York, asked by a young man in his bank how he could improve his business knowledge, replied: "Read along all lines of busi-

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ness activity. Study," he added, "besides your own line of work, the principles of economics, of organization, of accounting, of investments, of advertising, of commercial law."

Mr. Vanderlip has struck the key note of the truly efficient business man. The business executive of today needs more than familiarity with his own specialty. He comes constantly in contact with other kinds of undertakings. His problems involve forces and principles underlying all business. He must possess, therefore, besides brains and energy, a wide knowledge and accurate understanding of all important business facts and principles.

During recent years the need for more exact and scientific business information has led to the establishment in leading universities through the country of schools of commerce. These schools aim to provide a resident course of instruction in business principles and methods. That these schools are meeting a real need is proven each year by the large numbers of business men that enroll.

The photographer has the same problems to solve as any other business man. He has his own problems of production, of advertising, of financing and accounting, problems that must be worked out if he is to succeed. The law of business success, revolving around the correct working out of these problems, is the same in all lines of business.

If you were asked questions like this, for instance:

Are you in the best location for your business?

What lists are you using for circularizing prospects? What other advertising, if any, do you do? If so, how effective is it? Can it be bettered?

Do you know what it is costing you to do business?

What are your profits? How do you know your figures are correct?

Have you the necessary equipment for doing good work? Can it be bettered with profit to yourself?

Would you know how to answer them, and be sure that your answer would be correct? An efficient photographer would know the answers to these questions, and he would know how to handle correctly the numerous other problems that arise in his business.

The efficient man knows; he does not guess.





Applying Psychological Rules

By A. T. De Rome



Writing this, the last of this series of articles, a series in which I have tried to suggest to the amateur photographer some practical and homely ways of applying the great underlying principles by which he can make his pictorial representation more pleasing, I realize that I have, in the others, confined myself quite closely to a consideration of the many technical points involved. I will, therefore, in this, attempt to suggest methods of applying the most important of these principles. These last are those few psychological rules that, through having always given the same result when tested under given conditions, are accepted as governing rules by artists generally. These men are the artists who achieve success in the measure in which they succeed in influencing, through their art, the minds of their fellow beings, causing their thoughts to travel along the paths they would have them go. However, it is better that one does not think of these precepts as rules, but rather as suggestions from which can be drawn one's own conclusions. Rules are narrow things when applied to art; rarely will any two work together without one of them giving up so much to the other that they both lose much of their meaning. Either this or the production they are allowed to rule is made to become a thing of formula, a thing without the saving grace of "human interest."

We are each and every one of us, from birth to death, guided and influenced in all things by our instinct of self-preservation, it matters little how high or low our standing in the scale of culture and civilization. Self-preservation manifests itself through emotions which, in the order of their usual strength, arrange themselves as follows: Vanity, that which prompts us to ornament our persons with clothing, attempting to appear to the very best advantage in the eyes of our fellow beings; propagation of the species, that which prompts us to marry and make personal sacrifice that our offspring may rise to greater heights than ourselves; the gregarious instinct, which causes us to seek the company of others of our kind for mutual protection; and the desire for pleasure, which acts on all these others like a governor, causing the nervous system to rest and relax that it may all the more strongly seek and acquire those things that will make us greater in the eyes of our fellow beings. This last brings us back again to vanity, and again around the same endless circle of desires.

Analyzing pictorial representation as it comes to us in photography, we find its vogue, in portraiture to be founded on vanity. Observe how the most severe characters will strut and pose before the camera. The expression of vanity may be said to make its appearance almost as soon as the mind gains its independent reasoning powers, which is at about the age of five years, the child's mind before that age being concerned mainly with food and warmth. Historical as well as most technical pictures appeal to the propagation of species instinct,

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in this, that they are educational, creating in the mind an inclination in that direction. Landscape, marines, and views taken for the purpose of exalting Nature's wonders of light and shade, pattern and power of suggestion, are an appeal to the instinctive desire for pleasure.

Considering pictorial representation in this light, one will very readily see why certain pictures are so pleasing to some and uninteresting to others. And this points the lesson that one should, in dealing with portraiture, realize that success will be in proportion as every effort is bent to exact those personal traits of which the subject is most proud. While such a picture will be found to well please the model, and this is perfectly natural and is as it should be, this same picture is not what would be prepared for exhibition purposes. Where it is intended to arouse admiration in the many, admiration from those who are disinterested except as they can receive pleasure from it, the treatment must be entirely different, the intimate personal element being made subservient to the broader characteristics that others can be made to see in the portrayal of the subject.

When working with Nature's ever elusive elements as a theme, the every effort should be made to portray that which will give pleasure in order to gain the greatest amount of approval. Pleasure, as I have said, being a state of relaxation and rest, one should strive to stimulate the imagination. Here is the magic that brings back and increases those forces we have fatigued in our effort to satisfy the other instincts and desires, and this is the reason for the wonderful popularity of care-free music, light opera, and other forms of entertainments.

Applying these same principles still further, it is easy to see why colored prints have such an apparent advantage over those in monochrome. This color simply adds to their power of stimulating, in the store-house of our minds, a greater number of pleasurable memories of impressions garnered in the past, thereby increasing and strengthening our imagination two-fold. Going still further, stimulating the imagination to a greater degree, for example, by the addition of music, we arrive almost at the threshold of illusion. For example, let one surround himself with pictures depicting sadness and agony, meanwhile having sad and mournful music within hearing, and he will experience a sensation that leaves a strong impression. The same is true of pictures that are happy in theme, combined with music that is joyous in measure. Let one but try this and he will receive a lesson on the importance of having every element in a picture, or in any other artistic production, working harmoniously for the accomplishment of a definite object.

The reader, having followed me in these somewhat random observations that have made up my previous articles as well as this final analyzation of our mental process, can arrive at but only the one conclusion that the admission of the photograph to that elusive and ever-sought realm of art can only be secured by the work of those individuals who are large enough to lay aside their petty differences and personal preferences and accept the broad, all-powerful laws of Nature as their guide.

All that mankind has
preservation in pages of bo

o, thought, gained or been is lying in magic
CARLYLE.



Two Developing Formulas

By Dr. J. W. Spencer



With Illustrations by the Author



TELLING IT TO THE HEN

any variation may be determined by examining during development. Further dilution of this developer will give softer negatives, and of course the plates must be developed for a longer period of time. The formula is as follows:

Water	10 ounces
Pyro	35 grains
Sulphite of soda, anhydrous.....	100 grains
Carbonate of soda.....	65 grains

For developing post cards and papers (where I formerly got the worst cases of metol poisoning), I have, after carefully experimenting, evolved the following formula, which I do not hesitate to recommend for any paper, either glossy or matt surface, and it seems to me far superior to any developer I have ever used:

BEING one of those whose cuticle objects to metol, while still an ardent follower of the craft in an amateur way, I have worked out two developer formulas for myself which may be of benefit to some of my fellow craftsmen. I employ tank development for my smaller work in plates and am a firm believer that the use of the tank gives better results than can be had otherwise. For such development I make up forty ounces of solution, compounding this in the order given below, and then add thirty ounces of water. Development is carried on for twenty minutes at sixty-five degrees Fahrenheit. The length of time for development may vary slightly for different brands of plates, but



THE BEECHES—Bright sunlight 10 a. m.,
January, 1-8 second exposure, f-11 stop,
ortho plate



STREAM IN WINTER—Bright sun, 1 p. m.,
January, 1-10 second exposure, f-22 stop,
ortho plate

Ortol	20 grains
Hydroquinone	35 grains
Argo Soda	$\frac{1}{2}$ ounce
Water	16 ounces

I usually make up this formula, bottle in four-ounce bottles, and store in a cool, dark place for use as I need it. It has excellent keeping qualities and if properly bottled and corked will keep for months. It is a very inexpensive developer and absolutely non-poisonous as far as I can find. This is a slow-working developer and when image first appears will be brown, but if printed properly will soon tone out to a beautiful black, giving one plenty of time to handle and having great latitude as to staining, etc. Care must be exercised not to overprint the paper or cards, for, as stated above, the image comes up at first brown, taking some time to tone out to a black. Of course, if one likes a brown print, almost a sepia can be produced by overprinting, and, when proper strength is secured in the print, removing it from the developer.

The ingredients can be had at almost any photo supply house unless it be the Argo Soda, which is put up by the Defender Photo Paper Company, of Rochester, New York. Using the above methods, I am getting very good results and I feel sure others will be well pleased after giving them a good trial.

It often happens that the uglier a being is in nature, the more beautiful it becomes in art. There is nothing ugly in art except that which is without character, that is to say, that which offers no outer or inner truth.—RODIN.

The Making of a Picture

By J. L. Powell



With Illustrations by the Author

While it is of course necessary that the photographer should have a good working knowledge of his craft, the most important thing, if pictures are desired, is a reasonable amount of care and skill in the matter of composition. One should never make an exposure just because there is one more unexposed plate left in the holder or one unexposed film on the end of the roll. One should, in fact, never make an exposure without feeling reasonably certain that the resultant picture will be rendered pleasing through a consideration of the composition. And this restriction is not merely a matter of economy in the use of one's material. It is a restriction that one will do well to impose upon himself in order to avoid the danger of becoming tired of the work because of the too large proportion of mediocre pictures resulting. Most amateurs are inclined to spoil a large number of plates or films, as the case may be, during their earlier experience, simply because they fail to study the composition presented by the scene they are about to photograph.

What shall be left out of a picture should be given as much attention as is given that to be included therein. Very often the photographer will render



THE RAILROAD CROSSING

CAMERA CRAFT



THE DIVIDING FENCE

the background of his picture so sharp and full of detail that it draws the attention of the beholder from what was intended to be the chief point of interest. And this point of interest, this main object of the composition, should never be placed near the center of the picture space. Rather, it should be located, this point of principal interest, a little above or below the center of the picture space and a little to one side thereof. The horizon, or the sky line, if included, should never pass directly through the center, should never cut the picture in half. Get it about one-third of the distance from the top or from the bottom, as seems most suitable to the idea to be conveyed. Sometimes the rendition of an open landscape is intended to carry a feeling of space and atmosphere, "all out doors," as one often hears the idea expressed. In such cases a good expanse of sky that occupies two-thirds or more of the picture space will help the effect. In other cases the interest is concentrated on a small stream or roadway, with perhaps a mass of tree tops occupying the upper portion of the view. Included, these tree tops will draw the eye away from the real subject of the picture. Trimmed off and nothing is lost, while the attention of the beholder is more easily confined to the real point of interest.

Good composition in a picture is all important. And good composition means leaving out everything that does not help to convey the idea, tell the story, or express the sentiment of the view. If one cannot find a view having good composition, he should avoid spoiling a plate or film. A meaningless jumble of lights and shades does not make a picture. Neither does the crowding of the whole countryside within the boundaries of a 4x5 plate spell success. A few simple objects, a few commonplace elements, a little earth, some trees

THE MAKING OF A PICTURE



THE VALLEY HOMESTEAD

WHERE THE ROAD BENDS

and water, and a picture results,—if the composition is right. Study the composition of your pictures and you will get better results.

To know every detail, to gain an insight into each secret; to learn every method, to secure every kind of skill, are the prime necessities of success in any art, craft, or trade. No time is too long, no study too hard, no discipline too severe for the attainment of complete familiarity with one's work and complete ease and skill in the doing of it. As a man values his working life, he must be willing to pay the highest price of success in it,—the price which severe training exacts.—HAMILTON WRIGHT MABIE.



AN OLD OHIO HOMESTEAD

By GEO. H. WEBB
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PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—
THE EDITOR.

TO MINIMIZE HALATION: In photographing subjects that might show halation in the finished print, it is advisable to use black sheets of paper behind the plates in one's plateholders, or, better still, apply a coating of black paint of dull finish. This I have found to prevent halation in ordinary cases, but I do not think it would prevent it in all instances.—A. W. P., Missouri.

CONVENIENCE IN PRINTING: When printing gas-light papers, it is a good plan to take the several kinds of papers from their original packages and transfer them into empty plate boxes of corresponding size. On leaving the room or turning on the light, the paper will be more safely protected; and, one will find it a much handier way to get at the sheets as required than the usual plan of taking them directly from the original package in which they were purchased.—A. W. P., Missouri.

DIFFUSED PRINT FROM SHARP NEGATIVE: I often find it desirable to obtain both a sharp and diffused print from the same negative and this last I succeed in making by the following simple expedient: I first place the negative and mask in the frame in the usual manner, then place a sheet of glass, a plate from which the emulsion has been cleaned, on top so that it comes between the negative and the paper, lastly putting in the back. If still greater diffusion is required, I place two of these plates between the negative and paper.—H. H. P., California.

DEVELOPING FOR GRADATION: I suppose the following is generally known, but for the benefit of those who have not heard of it, I will repeat:

Any amateur who is taking his photographic work seriously has, no doubt, learned that there is considerable difference in negatives, some having a long scale of gradation, while in others, the range of tones from bright bits of sunlight to deep shadows is abrupt. In working for a negative having a long range of gradation one must use a soft developer, and any of the popular developers, if diluted with two or three times their bulk of water, will be capable of giving any range of tone. This does not mean that all the plates one exposes can be given this quality. Those that have been under-exposed cannot be given much range in their tones, as the darker parts or those that were in the shadow

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will be more or less blocked up for want of sufficient exposure. When a tank is used, the developer should be mixed with twice its bulk of water and the time to development doubled. The finished negative will show the improved result, as it will be one that correctly renders the different tones. It is of course understood that the plate must have been fully exposed. To get the best results from a negative made as advised, a soft emulsion paper should be used.—A. W. P., Missouri.

TWO GOOD DEVELOPERS: The two following developers I have found excellent and believing others may wish to give them a trial, submit them. The first is for paper and is made up as follows:

Water	10 ounces
Metol	7 grains
Sulphite soda, dry.....	$\frac{1}{4}$ ounce
Hydroquinone	30 grains
Carbonate soda, dry.....	$\frac{1}{4}$ ounce

To use, add three or four drops of a saturated solution of bromide of potassium to each five ounces of developer. The next is a developer for films, and is as follows:

Metol	7 grains
Hydroquinone	27 grains
Sulphite soda, dry.....	320 grains
Carbonate soda, dry.....	170 grains
Pyro	30 grains
Bromide potassium	3 grains
Water	36 ounces

This developer should be used ten minutes at a temperature of sixty-five degrees.—O. A. H. Missouri.

METOL TROUBLE: As an amateur, I find the shop of the professional photographer a pleasant place to spend an occasional hour I do not know what to do with otherwise. It is often profitable, and here is what I picked up recently. My friend Criley had a case of metol poisoning, most severe, so much so that he was uneasy whereunto the trouble would grow. He tried a physician, but happily he did not spend all that he had in being made nowise better. Pyro is his mainstay for plate development, but, oh, those fingers! He could not take them to the social card table looking that way, and he was afraid to apply the permanganate of potash and oxalic acid bleacher for fear of breaking open the much-inflamed skin. His wife made an evening engagement and he could not stay home, so he said, "Here goes with metol for once, anyhow." But he used a lotion of his own, and mirabile dictu, the next morning his fingers were so much improved that he made another application of his remedy. And presto, there were no more poisoned fingers! Now friend Criley theorized thusly: If the hypo bath will neutralize the activity of the developing agents in the print, why will it not neutralize the developing agents in the skin? So he bathed the hand that had been in the developer well in the hypo dish before he finished the work in hand. Simple, isn't it? And yet a lot of wise ones had not thought of it.—C. R. Lowe, Nebraska.

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DEVELOPING STALE PAPER AND CARDS: The formula, given below as printed in our March issue, was incorrect in this that the amounts of acetone and sodium sulphite were incorrectly given. Corrected, the paragraph reads as follows: I find that I frequently buy a supply of paper or cards and then fail to use it before it becomes long past date. However, I have no trouble with it when using this developer:

Water	10 ounces
Acetone sulphite, Bayer's.....	75 grains
Sodium sulphite, dry.....	300 grains
Edinol	30 grains
Hydroquinone	15 grains
Potassium bromide, crystals.....	10 grains
Sodium carbonate, dry.....	400 grains

For use, add four ounces of water to each ounce of the above required to make the desired quantity. With this developer I get good, clear prints from paper so old that with an ordinary developer the surface simply turns gray or else mottled and mealy all over.—C. L. Fuller, Iowa. (I. P. A. 2810.)

WHEN ICE IS LACKING: Photographers in locations where the weather is very warm and ice is scarce or entirely lacking, are often confronted with spoiled plates, films, and prints as a result. A substitute for ice, one that will answer the purpose, may be prepared as follows: Well mix a given amount of well-pulverized common sal ammoniac, or muriate of ammonia, with twice its bulk of saltpetre, and label it No. 1. Next set aside an equal amount of well-pulverized sal soda, or washing soda as it is called, labeling this No. 2. These should be kept separate until wanted for use, as it is the mixing of the two, Nos. 1 and 2, that produces the extreme coldness. The degree of coldness that can be produced in a solution, by placing this mixture around the vessel containing it, depends upon the bulk of the solution as compared to the amount of the mixture. Each user must work that out for himself. This mixture will freeze ice cream. Another formula, one that will make ice, is as follows: Set a five or ten pound lard bucket in a larger bucket containing a weak solution of sulphuric acid. This last should come well up around the smaller bucket, but of course not enough to enter it over the top. Upon adding a handful of Glauber's salts, the temperature will fall sufficiently to freeze water in the inner bucket. Another refrigerant is made by mixing two pounds each of potassium nitrate and a like amount of ammonium nitrate with five pints of water.—Theo. E. Peyser, California.

Mr. Harkrader Here

G. H. Harkrader, popularly known as "Harkie" here on the Pacific Coast, has the past month been calling on his wide circle of friends and acquaintances, and finding them all delighted to see him again going the round of the Coast cities. He is representing the Bridges Manufacturing Company, of Rochester, New York, and reports business as surprisingly brisk in his line, considering that this is somewhat of a dull season with the portrait photographers.

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No. 11

An Unjust Tax on Amateur Photography

The management of the Panama-Pacific International Exposition, we are credibly informed, has granted a concession that imposes a tax upon amateur photography, a tax that is as unjust and unfair as it is ill-advised and uncalled for. The management of our coming Exposition, an Exposition supposedly of international scope and character, apparently prefers to adopt the methods of the country circus rather than follow, in this matter at least, the precedents established by the St. Louis and the Paris Expositions, the only two of international scope that have been held within the past twenty years.

The management of the Panama-Pacific International Exposition cannot plead lack of information on the subject, either as to the action of other exposition managements or as to the temper of the public in the matter. Both ourselves and the chairman of a special committee appointed by the California Camera Club have furnished it with definite data as to the actions of other expositions, and a petition of protest against the proposed tax, signed by over seven thousand amateur photographers of this city and State, has been presented.

The management of the Panama-Pacific International Exposition can hardly put forth the antiquated and inconsistent plea that this tax must be imposed in order to protect the concessionaire who has paid for the photographic privilege. A tax of ten dollars per day would not have that effect. The photographer whose aim might be to secure negatives from which he could produce prints to be sold in competition with those of the concessionaire, would simply charge this fee of ten dollars against the cost of securing the negatives and regret that his profit was lessened by that small amount. Only the absolute prohibition of cameras upon the grounds would protect this favored individual or firm, the owner of the photographic concession.

The management of the Panama-Pacific International Exposition cannot justify its action by a claim that the use of small hand cameras within the grounds of the Exposition involves any trouble or expense that will burden the Exposition in the least, something that must be conceded for their policy of policing the grounds to prevent avoidance of their tax. The amateur photographer provides his own apparatus and material, the sunlight that completes the requirements is hardly a fit subject for taxation, and pointing a camera and pressing the bulb will in no way damage or deface any part or portion of the buildings or landscape.

The management of the Panama-Pacific International Exposition cannot square its action with other than a small and mercenary motive sufficiently developed to overshadow any consideration that it might have for the rights its expected visitors may feel they should enjoy. It would seem that a tax

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upon the small hand cameras of the visitors is plainly at the very least an unjust discrimination. The visitor who does not employ the popular hand camera for that purpose will, no doubt, attempt to picture to other possible visitors, by word of mouth or pen, his impressions of the beauty and educational value of the Exposition. Evidently the impossibility of also taxing this form of expressing one's love of the beautiful and educational is the only reason that it escapes the same fate as that of amateur photography.

As for ourselves, we regret most deeply that the necessity for anything so disloyal as a criticism of a Pacific Coast undertaking has been created. We have put forth every possible effort to prevent such a situation. In order that our activities might not be open to the criticism that they were prompted by a desire for aggrandizement, either by ourselves or this magazine, such efforts have been mainly made along the line of assisting the special committee of the California Camera Club to obtain and present the information that we honestly feel should have made unnecessary this criticism of the actions of the Exposition management. And, let us add, the work done by the California Camera Club, through its officers and this special committee, has been, and is, worthy of the highest praise. Untiring as has been its activity in behalf of what it feels is simple justice to the amateur photographers of the world, it has at all times preserved a proper and commendable attitude that could not be assailed as in the least disloyal to the Exposition that means so much to us all here on the Pacific Coast.

And our readers, we feel quite sure, will not fall into the error of supposing that the matter is simply one of wishing to escape a small fee. It is a matter of simple justice, not only at our coming Exposition, but at others that will follow, others that will perhaps be as ill-advised in the matter and inclined to fall back upon the precedent which our Exposition will establish. There is, of course, a possibility of this tax not being imposed if a sufficient amount of the opposition that its announcement must create is made manifest to the management before the somewhat distant date of opening. Our only reason for this criticism is our hope that it may call forth an expression of some part of this general disapproval that might not otherwise be voiced, particularly by such influential bodies as the camera clubs and photographic societies of this and other countries.

Paul Lotz Passes Away

Paul Lotz, one of the best known photographers in this city, passed away in New York on September twenty-first at the age of fifty-seven years. He was one of the most popular men in the profession, both here and throughout the East, on account of his most pleasing personality, kind disposition and sincere and upright character. Lovable to a degree, his death is mourned by all who had the good fortune to know him; and, as he took an active part in every movement for the betterment of photography, those so sorrowed make up no small number.

Some men are ground down on the grindstone of life, while others get polished up—it depends on their kind of stuff.—A. A. STEWART.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

The Photographic Uses of Formalin

A. L. Munday, B. A., writing in *Photography and Focus*, says: Formalin is a liquid which exercises a very powerful influence upon gelatine and allied colloids. It "hardens" the gelatine so much that, if the action has been allowed to go far enough, it is no longer possible to dissolve it in hot water; it gives it a tough, leathery character, and causes it to contract. As some, at least, of the troubles of the photographer are due to the softness of a gelatine film, it may well be supposed that such an agent is likely to be of very great service. The supposition is correct, but there are certain limitations to its use which should be kept in view.

While the softness of a film of gelatine, whether on glass, paper, or celluloid, may be looked upon as an evil, it is not an unmixed evil. It allows the various solutions which are used to permeate the layer easily, and so to do their work efficiently and quickly. If the film were made as hard as possible with formalin, while it would still swell and soften in water, it would not do so very readily, and the action of any liquids that might be employed on it would be interfered with. Any treatment with strong formalin should therefore be reserved until we are quite sure that we shall not want to intensify, reduce, tone, or act in any other similar way upon the negative or print, and even quite a slight treatment with the hardening agent should be avoided as far as possible if there is any chance of such operations being required.

The formalin as purchased is too strong to use without dilution in any case. For moderate action we may take one part of the formalin and dilute it with nine or ten times its bulk of water. A plate left for three or four minutes in this solution is not likely to frill even in the hottest weather, and is also proof against any of those troubles which are occasionally met with in such circumstances, when a wet film of gelatine is some

considerable time drying. These troubles are due to incipient decomposition of the gelatine, and against this the formalin acts as a powerful antiseptic.

The form which this decomposition takes which is most likely to bother the photographer is the sticking of his printing-out paper prints to the glass or other surface to which he has squeegeed them. Those who do not use formalin are sure sooner or later to meet with this. It is caused by some superficial change in the gelatine coating of the paper, and most often occurs in summer time.

A complete preventive is to give the prints a bath of formalin, of the strength just mentioned, the last thing after washing them to get rid of the hypo. After the formalin treatment there is no need to wash them further; but it is usual to give them a single rinse and then to allow them to dry. When quite dry they are rewetted and squeegeed, and all trouble of sticking is removed. A bottle of dilute formalin may be kept for this purpose and used over and over again, so long as it is found to be of working strength; it may have a little more of the strong solution added to it from time to time.

A method of using formalin, which is sometimes of great service, is to harden the film on a plate to such an extent that it can be dried by heat. If we take one part of formalin to three parts of water, and leave a plate in it for a few minutes, it may be taken out and placed direct into water at little short of boiling point without any harm resulting. After leaving it for a minute in the hot water, if it is then taken out and placed, hot as it is, in a current of air, it will become quite dry in a very few minutes. This process gives the surface a peculiar glossy look and leaves the film very horny and repellent.

Formalin is most serviceable when, from the heat of the weather or of the solutions

red, there is trouble from frilling. It may then be employed in a fairly dilute form, one to ten or one to twenty, as a preliminary bath, for plates or papers, following it up by several changes of water before proceeding with the ordinary operations.

When formalin and sodium sulphite come together, they mutually react, and one of the products of the decomposition is sodium hydrate or caustic soda. This is a very powerful alkali, and it is quite possible to use it for developing purposes.

Thus a plain solution of metol or of hydroquinone, for example, in which sulphite is present as a preservative, becomes an active, energetic developer merely by adding formalin to it. There seems to be no advantage to be gained by making up a developer in this way, but it is mentioned to show that we must be on our guard against bringing a plate or print, the film of which contains formalin, into a solution containing sulphite or vice versa. With such developers as amidol, which a very slight degree of alkalinity makes extremely vigorous, it is quite easy to get a bad fogging action from such a cause.

On the other hand, unlike alum, formalin does not decompose hypo, and so there is not the same necessity for a thorough washing between a treatment with the one and with the other. The necessity for keeping hypo and alum apart from each other as far as the emulsion on a plate or print is concerned, is a point which is often overlooked; and the permanence of the picture is thereby endangered. It is also a fruitful cause of spots and markings which resist all the efforts made to remove them. By substituting formalin for alum then, in cases where some hardening agent is necessary, not only do we get one which is far more powerful, but also one which reduces the washing otherwise required.

Formalin being volatile, there is no necessity to wash it all out of plate or print before putting either up to dry. Except that which combines with the gelatine itself, the formalin will dry out with the moisture.

It will be seen that in formalin we have a very valuable reagent in hot climates or in exceptional summer weather in this country; preventing frilling, blistering and attendant loss of the negative work, and also forming a protective film against prints sticking when squeezed from the bath. At the same time, since it

makes the gelatine horny and less amenable to the action of the solutions, it should only be used when actually necessary.

The Influence of Potassium Bromide in the Developer on Sulphide Toning of Bromide Prints

It is well recognized by now that the initial development of the bromide print plays the most important part in the production of a good sepia tone on subsequent sulphide toning. It is agreed by most people that development should be thorough; in fact, it has been urged that nothing short of development to the limit will insure a good sepia tone afterwards; this, as shall be shown later, is not necessarily true.

Again, it has been often pointed out that one of the most common causes of poor yellowish tones is that of using the same developer over and over again, even though the amount of developer is quite sufficient for the area of paper used. For instance, if ten quarter-plate prints are developed in two ounces of normal developer on end, it will be found on toning that the first prints developed will tone to a good sepia, while the last ones developed will result in yellowish sepias. This result has been ascribed to the effect of the bromide set free in development from the silver bromide being reduced to silver. This, however, is not so, but the poor tones appear to be the result of oxidation products of the reducing agent used, amidol, metol, rodinal, etc.

That they are not due to bromide is shown by the fact that if bromide of potassium is added to the fresh developer in fairly large quantities, and the prints are developed fully, the resulting sepia tones will be found to be much colder than normal, and not warmer than those produced on prints developed to the limit with normal developer only slightly restrained. In fact, with the latter, directly development is stopped short of the limit, there is a change in the direction of yellow sepias on toning. With the heavily restrained developer this is not so, and unless development is stopped very early, the resulting sepias will always be good, although they vary, of course, with the length of development. Moreover, the black and white prints before toning are likewise of good quality. The main point to be insisted upon is, to always use fresh developer; it will be found that if the paper is soaked before de-

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velopment, a minimum quantity of developer is needed; a convenient rule being, divide the area of the print in square inches by sixty; this will give the quantity needed in ounces; thus a 12x10 needs two ounces, a 5x4 print one-third ounce, and so on.

The following tables will show the matter more clearly:

NORMAL DEVELOPER.

Amidol	2 grains
Sodium sulphite, crystals.20 grains	
Potassium bromide, ten	
per cent	2 minims
Water	1 ounce

RESTRAINED DEVELOPER.

Amidol	5 grains
Sodium sulphite, crystals.20 grains	
Potassium bromide, ten	
per cent .....	.50 minims
Water	1 ounce

The exposed prints were made behind a gradometer, made in the usual manner of steps of translucent paper, numbered from one to thirty. Strips F and H were developed in "Normal" developer, the others in the "Restrained."

Strip.	Exposure.	Development.	Steps.	Colour
F	30 secs	2 min	5-21	Good Sepia
H	30 secs	1 min	1-19	Yellow Sepia
A	60 secs	1 min	3-18	Yellow Sepia
B	60 secs	2 min	6-19	Good Sepia
C	60 secs	3 min	7-20	Cooler Sepia
D	60 secs	4 min	8-21	Cooler Sepia still
E	60 secs	5 min	9-22	Cold Sepia

With another bromide paper the results were as follows, strips A, B, C and D being developed in "Normal," the others in "Restrained" developer:

Strip.	Exposure.	Time of Appearance.	Time of Development.	Steps.	Colour
A	120 sec	5 sec	3-4 m	1-23	Yellow Sepia
B	120 sec	8 sec	1 1-3 m	3-23	Very warm Sepia
C	120 sec	8 sec	2 m	4-24	Warm Sepia
D	120 sec	8 sec	2-3 m	5-24	Good Sepia
F	120 sec	30 sec	1 1-2 m	2-18	Yellow Sepia
G	120 sec	30 sec	3 m	2-21	Warm Sepia
H	120 sec	30 sec	4 1-2 m	3-22	Good Sepia
K	120 sec	30 sec	6 m	4-23	Cool Sepia
L	120 sec	30 sec	9 m	5-24	Cold Sepia

The longer times of development were due in this last table to the use of a slow developing bromide paper on a cold day; the water of the developer could have been decreased with advantage.

It is interesting, too, to note that with the restrained developer the latitude of the paper

is very much increased; for instance, in the first table, strips B, C, D, E show a constant contrast of thirteen steps from black to white; that is to say, by exposing the print behind a negative for a longer time, and developing for a shorter time, one will get precisely the same print as regards contrast, as by exposing for a shorter time and developing longer, this, of course, within the limits shown in table; moreover, the black tones in these four strips were perfectly pure. This holds good for the second table also, for the strips G, H, K, L show a constant contrast for nineteen steps, this bromide paper being much softer under this treatment than the former.

The proportions of the developer are important, for it must be remembered that sodium sulphite is a weak alkali, while amidol is acid, and when it is added to the sulphite solution there is an interaction which can easily be detected by the odor of sulphurous acid given off. In the second formula the proportion of amidol to sulphite is much increased, that is to say, the developer is less alkaline; it is then more amenable to the action of potassium bromide, which then gives the latitude mentioned above, for if added in like quantity to the first formula, it slows development rather than exercising a restraining action.—N. C. Deck, in *Harrington's Photographic Journal*.

Influences Modifying Color Rendering

Three influences controlling modification of color rendering in screen-plate color work are the effects of intensities, reflections and contrasts. When dealing with ordinary monochrome photography, these influences are almost ignored, but in color reproduction they obtrude themselves sometimes in the most unexpected manner; for example, an Autochrome of a street scene showed the road and pavements as a silvery blue, due to sky reflection following a sharp shower.

Extreme color intensities, when in large masses in the same picture, are extremely difficult to render, for the reason that color intensities vary considerably with the quantity of white light admixed with them; the whiter the light the more brilliant or luminous the color to the eye, and, conversely, the feebler the light the less brilliant or blacker the color. This circumstance creates over-exposure of the high lights when endeavoring to secure detail in the shadow

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of dark parts, resulting in the high lights presenting a washed-out and weak, detail-less appearance. In monochrome work, brilliant high lights and deep shadows often contribute largely towards an harmonious result, but in screen-plate photography such differences in light or color intensities are best avoided.

The following table indicates what change can be expected in color contrasts:

Original colors		Change due to contrast	
Red.....	Orange	Red, yellower	Orange, green gray
Red.....	Green	Red, unaltered, brighter.....	Green, brighter
Red.....	Blue	Red, more orange	Blue, greener
Red.....	Violet	Red, orange	Violet, unaltered
Green.....	Orange	Green, bluer	Orange, yellower
Green.....	Blue	Green, olive	Blue, more violet
Green.....	Violet	Green, yellower	Violet, bluer
Orange.....	Blue	Orange, redder	Blue, bluer
Orange.....	Violet	Orange, greener	Violet, bluer
Violet.....	Blue	Almost unaltered	Almost unaltered

The influence of reflections cannot be ignored. It is evident that a flat piece of pure white matt-surfaced paper, as seen in an ordinary room, cannot appear absolutely white, for all the objects in the room must reflect some colored light, and the lights reflected from different objects are usually of different colors, so that the final tint of the piece of paper depends not only upon its natural color, but also upon the presence and proximity of extraneous objects, such as curtains and cupboards. Consequently the apparent color will not be "white," but a delicate, indescribable hue of the preponderating reflected tint. If instead of the flat piece of paper we consider the appearance of a white egg under similar conditions, it is evident that the rounded surface of the egg will cause it to have a different appearance; the high light will appear grayish, with the exception of that small portion upon which the direct light falls, which may appear white; the remainder of the light side will have a delicate grayish tint, the depth of which will gradually increase as it merges into the deeper gray of the shaded side, which shadow will be tinged with the color reflected into it. A glass of water placed in similar conditions will be affected by light, shade, and reflected colors in a similar manner. Again, glazed china or

earthenware, a shiny apple or a tomato, will show spots or streaks of white reflected light, images of a window, on the small portion of surface where the light falls, and in these spots all color will be lost, or, at any rate, considerably modified by the reflected color of the sky, while the shadow portions may even assume a different color by the admixture of a preponderating reflected tint. It is advisable, therefore, in

numerous instances, that high lights be reduced by diffusion, and reflected shadow tints abstracted by suitably selected and carefully arranged reflector screens.

Color contrast should prove a valuable artifice to the screen-plate photographer in still-life studies, since it places at his command the power of increasing the value of colors; for example, placing orange and blue together intensifies both colors, the blue becomes bluer and the orange more of a red orange.

The contrasting colors may be secured either by separate objects or the employment of a tinted background. I employ a sheet of ground glass on which I work either a suitably colored background with crayons blended with the dry fingers, or I place a sheet of colored paper at the back of the glass—the matt surface of the glass in front softens the color intensity most effectively.—Arthur E. Morton, in *British Journal of Photography*.

Stereoscopy Without the Stereoscope

The exhibition of scientific photography, which is being held in Vienna in connection with the Austro-German Medical Congress, contains (writes the *Times* correspondent) an exhibit which marks a great advance in the progress of stereoscopy. This is a series

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of photographs in which true plastic effect is obtained without the employment of a stereoscope or any other optical instrument. For the various objects depicted to stand out in their true relations to one another, all that is required is that the picture should be looked at directly and not from one side or the other. The method by which this result is obtained is, briefly, as follows: A double negative is made in the ordinary way by the use of a stereoscopic camera with twin lenses. Instead of the reconstruction by means of the stereoscope of the plastic image from the pictures thus obtained, the inventors, Herr Friedmann and Herr Reiffenstein, have devised another means of making each eye see only one, and that one its own particular, image. This consists of the application of the fact that when placed against a white background the image on a positive transparency is visible, and that when seen against a black background it becomes invisible, while, should the image be bleached, the contrary is the case. From the negatives which have been obtained in the ordinary way with the stereoscopic camera are made, therefore, from one, an ordinary transparent positive, and, from the other, a negative which is afterwards bleached. Let it be assumed that from the negative corresponding to the image seen with the right eye the ordinary positive is made, and that the left eye's picture becomes the bleached negative. If these two transparencies were superimposed one upon the other and laid upon a white background, only the right-eye picture would be visible. On the other hand, if placed upon a black background, only the left-eye picture would be seen. It is, however, necessary that both eyes should see their respective pictures simultaneously. For this a background is required which to the right eye appears white and to the left eye black. This is provided by a sheet of glass, the back surface of which is prepared in a special manner, while the front surface is ribbed convexly, whereby the rays of light falling upon this surface are broken in such a way as to make it appear black or white, according as looked at from one side or the other. The problem is, therefore, solved. The two transparencies are placed one upon the other and then both upon this background. The right eye sees only its proper image, and the left eye likewise. These

combine automatically, as is the case when a stereoscope is used, and the result is a true plastic picture. The inventors exhibit five or six specimens of such photographs, to which they have given the name of "Stereographs." Three of these appeared to the writer to be almost faultless. One of them represented a lump of quartz, in which even the shimmer on the surface was reproduced; another, a spray of orchids in a vase; and the third, the skeleton of a gorilla. In the other specimens, the two images did not seem to combine easily. It must, however, be added that by other persons present these stereographs were considered the most satisfactory. The new process has attracted considerable attention in scientific circles, while the police authorities are also interested in it, in view of its possible utilization in criminal photography. The inventors are making arrangements for the manufacture in cheap and handy form of "backgrounds" which they hope before long to have brought to such a state of perfection that the process will be generally employed. With such "backgrounds" the inventors state that pictures can be looked at like any other photograph. In the case of the stereographs now being exhibited, the effect of the black-and-white background is, however, obtained by a different method, which necessitates their being viewed by transmitted light.—*British Journal of Photography.*

Reversal

Many photographers must have been surprised some time or another to find, on developing a plate, that, instead of getting a negative image, as they expected, the plate has the appearance of being a more or less perfect positive. That is to say, the light parts of the subject are represented by the more transparent portions of the plate or film, while the darker parts, on the other hand, are represented by the more opaque parts.

The phenomenon is known as "reversal" or "reversal of the image," and it is sometimes remarkably perfect, every gradation of the subject being faithfully reproduced, so that it would be possible to make a true negative by contact from such a result, and from this negative in turn to obtain quite good prints. We do not know that this experiment has ever been performed; but it should be possible. In the majority of cases

reversal, the action is not complete enough for this, or may only be manifested locally, the brightest parts, or sometimes the darkest parts, being reversed, while the rest of the plate is normal, though usually very foggy.

There is no remedy for reversal, when once it is found to have taken place. The negative—it will be convenient to call it such, although the whole or parts of the image may be positive—is completely spoiled and useless.

Interesting as the effect may be, one does not care to have it manifested on some valued work; and it will be well, therefore, to note the cause or causes of the phenomenon, and the conditions which favor it, and the reverse.

Strange to say, reversal as it is most often met with is passed over in silence by all the text-books upon which the photographer relies. Chapman Jones in his "Science and Practice of Photography," Sir William Abney in "Instruction in Photography," and every other treatise to which I have been able to refer, mention only that form of reversal the cause of which is extreme over-exposure. This form will be referred to later; but for the moment we will keep to the reversal which is met with when over-exposure is quite out of the question. It seems it is a modern phenomenon, or the two writers just named would certainly have alluded to it.

If a very rapid plate or film receives an exposure which is altogether too short to give a satisfactory negative, and is then developed fully in a strong developer, the resulting negative will sometimes be found to be converted into a positive in its least exposed parts. There is also, usually, a reddish fog or stain over these parts, but not enough to prevent the negative from giving a negative print.

The exact cause of this phenomenon I am unable to state, but there seems to be no doubt as to the conditions which favor its production. A very powerful developer, particularly metol-hydrokinone or pyro-metol, appears to be a necessity, and the development must have been carried on for quite a prolonged time. The edges of the plates are always very badly fogged. So far as I am aware, also, reversal of this kind is not met with in hand or machine development; which

would appear to indicate that the dark-room light may have something to do with its production. I have heard it suggested that it is due to the development of a feeble image on the surface of the plate, which image then under the rays of an unsafe light prints a positive on that part of the film which lies below it. It may seem to be rather a far-fetched explanation; but that in some way this form of reversal is due to the prolonged or forced development of a very much under-exposed plate or film is certain.

The under-exposure is the prime factor. Possibly the fact that the reversal only takes place in the least exposed parts of all may be connected in some way with the fact that where there is no latent image on which the developer can act, no soluble bromide is formed as a by-product, and so those parts are exposed to a full strength developer for a longer time than the rest.

To prevent any reversal of this kind from happening, the photographer must make sure that his exposure is sufficient, must keep the plate protected from light as much as possible during development, and must be careful not to over-develop.

The other form of reversal, sometimes called "solarization," is due to excessive over-exposure, and is dealt with in most of the standard text-books. If a plate is given some hundred or thousand times the correct exposure, it will develop up as a positive. The exact increase necessary varies very largely with different plates; but when it has been found, it is quite possible to use the process as a method of making positives direct, although it has no particular advantages over the ordinary plan of making a positive by contact from a negative, which is certainly preferable.

This reversal is most often met with in interiors and similar subjects having a very long range of light and shade. The interior itself may appear to be correctly exposed to give a negative, while the comparatively brilliant scene outside the windows may be so much over-exposed as to develop up a positive; or if the room is illuminated by means of electric lights, and the glowing filament itself appears in the picture, it may be reversed while the rest is not. On the print from such a negative, the film itself appears as a black line in consequence; a

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thing that many must have noticed. The sun itself in a landscape may for the same reason show as a black spot in the print; but it is too often completely hidden by fog and halation for this to be noticeable. It is the commencement of reversal of this kind which is the cause of the disproportionate thinness of the sky in some landscape negatives when the exposure has been very full.

The preventive of such a defect as this, once more, lies in correct exposure. Modern plates or films by any of the recognized makers have sufficient latitude for there to be no fear of one part being reversed while another part has only had just sufficient. The Hydra plate of the Paget Prize Plate Company is one with which reversal of this kind appears to be quite impossible; and so it enables us to photograph subjects of extreme range, such as those just mentioned, without any signs of it. I do not know any other means by which it would be possible, for example, to include the electric lamps which were lighting the room and to get the room and the lamps without any signs of reversal in the filaments.

There is no cure for a negative suffering from this form of reversal; but if, before development, it is known that the exposure has been so excessive as to give rise to it, it is said that it can be prevented by soaking the plate for a quarter of an hour or even longer in a solution containing five grains of potassium bichromate and fifteen minims of strong sulphuric acid to the ounce of water, and then washing and developing it. One would hardly expect a negative obtained by such a process would be very successful.

Reversal, therefore, may be regarded as one more reminder of the supreme importance of correct exposure in photography. If the amateur uses an exposure meter, he may rely upon it that his knowledge of this curious phenomenon will remain a purely theoretical one, unless he deliberately sets out to obtain the reversal.—Rupert Barrett in *Photography and Focus*.

Working Up Negatives

While a retouching desk is a very convenient piece of apparatus for those who have to do that particular form of working up known as retouching, it does not lend itself at all well to the other operations comprised in "faking" a negative, to which

the amateur photographer usually has more frequent recourse than to retouching. For these it will be found that nothing else is quite so convenient as a table or desk made from a good-sized sheet of stout plate glass fixed either quite horizontally or else with the comparatively small inclination of the old-fashioned desk. This can be furnished with a light below, and facilitates work on the negative to an extent which is remarkable.

The cost of a large piece of plate glass need not be prohibitive, since a scratch or two, which is sufficient to make it unsuitable for a shop window, in no way interferes with it for the present purpose. My own, obtained at an auspicious moment from the local glazier, who had just taken it out of a broken window, measures 18x30 inches. This plate glass, with a sheet of ground glass underneath it, forms the top of a box about seven inches deep, which is attached to the top of a small table, the legs of which have been shortened seven inches, so that the glass is just table height, and one can sit up to it to work, as to an ordinary table. Inside the box are a couple of metal filament electric lamps, coupled up to a length of flexible cord and a wall plug. There is an opening at the back of the box into which I can put my arm, so that the lamps can be taken out and replaced should they become useless.

The method of using such an appliance is no doubt obvious enough. Sitting up to the table with no light beyond the powerful and pleasantly diffused light which comes up through the glass, the negative is laid down on it, preferably with a mask of brown paper round it to cut off the extraneous light, and the effect of any stump work, rubbing down, dodging with papier minéral, etc., is seen at once.

I have thought of doing developing on the table, using a dish with a glass bottom, and a red light below; but up to the present this is merely a castle in the air. At least it ought to save all handling of the negative, dipping fingers into the solution, etc., to see when the plate is dense enough.—C. S. Buckley, in *Photography and Focus*.

(I can vouch for this being a good plan. I used such an arrangement before the San Francisco fire, and intend to fix it up again.—H. D'A. P.)

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

The Inexpensive Camera Often Scores

Some friends of mine recently went on a little automobile trip through a somewhat wild part of the State and two of the party carried cameras. One was equipped with about the finest outfit that money could buy, while the other carried a simple little box camera that was much in vogue before the folding type of hand cameras became so popular. The first photographer returned with a collection of snaps, few of which would have been possible with a camera such as the other worker used, but practically every one of the pictures were of such a character that they had only a momentary interest for those who had composed the party and who were generally more or less interspersed throughout the picture space. The worker with the inexpensive outfit had been forced, by reason of his slow lens and shutter, to seek views from which his companions were excluded. In fact, he had almost been forced to forego taking other than such views, as he could find and photograph deliberately while a halt was made for lunch, before starting in the morning and after stopping for dinner at the end of the day's ride. The consequence was that many of his prints were fine little pictures, as a rule unspoiled by the inclusion of the automobile and other members of the party in the immediate foreground. At the same time his collection of resultant prints was far from being devoid of that personal element that gave the other worker's pictures what value they really did possess. He had several group pictures of his party, seated around the entrance to establishments where they had put up for the night. One or two other views depicted the noonday repast being enjoyed under the shade of some conveniently located trees. But the point that seemed most plainly made by a comparison of the two sets of pictures was the fact that the better work composed by the cheaper outfit was such that better work resulted than

would have been the case had these restrictions not governed. Force a worker to use a slow shutter, one that necessitates deliberate selection and the use of a tripod, one that precludes the making of those "snaps" so dear to the heart of the possessor of a fast lens and shutter, and you will be doing no small part towards compelling good work. The worker who has only an inexpensive outfit with which to gratify his taste for photography may envy the individual who can command the more expensive and pretentious outfit; but, if he will but use the care that his restricted opportunities demand he should secure even more satisfying results than can be accomplished in the face of the ever-present temptations to "snap" things just because the speed of one's lens and shutter makes so doing possible.

Converting a Negative Into a Positive

An Illinois reader wants to know how this can be done and I am really unable to advise. There was a process called the Coustet one, given in the foreign photographic press some years ago, but it was evidently unsuccessful in the hands of those who tried it. One plan that was put forward by a worker who claimed it to be quite successful, and put forward without the usual complaints following, is given thus: Develop fully, well wash, and then convert the silver image into silver chromate by immersing the plate in a ten-grain-to-the-ounce solution of chromic acid. Next wash well and expose to daylight from the back, lastly developing again with a clean working developer like metol-hydro. This last reduces the silver haloids not reduced and not removed, as the plate was unfixed, leaving unaffected or only partially dissolved the silver chromate which makes up the original negative image. This is worth experimenting with and I would like to hear of the success or otherwise of any of our readers who might be interested enough to give the process a trial.

THE AMATEUR AND HIS TROUBLES

Some Interesting Albums

Some months ago I made a note in my memorandum book that has just come to light from its hiding amid an assorted lot of names, addresses and other data. It recalls an album that I found in the house of a friend residing in a small interior town, the album being the work of an amateur friend, also a resident of the same town. The cover was titled, "A Year-Book of Our Town," and its contents lived up to the title in every respect. There was a picture of the town hall draped in snow, with a most suggestive setting of snow-clad trees and shrubbery, this picture being titled, "January." February was represented by another picture showing several of the most popular stores on the main street, the front of one of them bearing a generous sign suggesting that St. Valentine's usual offerings were for sale within. March was represented by a rather windy-looking picture of teams, blanketed against the chilling blasts that seemed to pervade the scene. April or May, I have forgotten which, showed the effect of warm spring sunshine upon the grass and shrubbery in front of some residences in a well-recognized street. Each month was portrayed by means of a picture that not only gave a suggestion of the season depicted, but at the same time a pleasing and easily recognized picture of some characteristic locality in the town. The amateur in question had made up a number of these albums and presented them to his several friends, with the result that they were granted much more consideration than is given the average productions with which some users of the camera try to discharge their indebtedness in the way of Christmas obligations. The idea is not a bad one and an attempt to carry it out will give any worker an excellent opportunity to exercise his skill, his appreciation of the material available and his power of selecting therefrom. Best of all, if the plan be carried out and such a set of negatives made during the coming year, the worker will be in a position to make his friends a little gift of his own production that will have some value in the eyes of the recipient.

Photographing Show Windows

The other day I saw some very fine photographs of show windows and took some pains to find out how they were made. There were absolutely no signs of the dis-

agreeable reflections that seem so persistent in this class of work. When explained, the matter was simple enough. They had been taken only after the glass of the window had been removed. A little investigation disclosed the fact that most of these windows are glazed by inserting the glass in place and fastening it there with strips of wood or metal or metal clips, held in place by only a comparatively small number of screws. The photographer, so I was told, simply employed a few men, experienced in such work, to remove the glass and restore it in position after the desired exposure had been made. The results were certainly the best I have ever seen; and, while the plan, though simple, involves some expense, it is far from being one that is impossible of execution.

The Enlarging Lens

The advice to use the same lens as the negative was taken with, when enlarging therefrom, is good; in fact, I advise so doing when answering inquiries on the subject. But I have just found that it is advice that needs qualifying. If the lens on the camera is fitted with a shutter having vulcanite blades or wings and the enlarger is one using condensers and a light giving off some heat, trouble is likely to ensue. These blades are easily warped by heat and but little of such warping is required to render the shutter other than light tight and satisfactory.

A Pliable Background

In answer to a query from an Ohio reader: Shave a bar of common yellow soap and boil it in half a pint of water until dissolved. Then add half an ounce of glycerine and stir in a pound of the desired paint pigment. Well size the canvas or sheeting and then paint with the above. A background so painted can be rolled up and handled quite roughly without showing those creases that are so objectionable in most grounds after they have been in use a short time.

Camera Stolen

A Thornton-Pickard Ruby Reflex camera, size $3\frac{1}{4} \times 4\frac{1}{4}$, fitted with Goerz Celor lens No. 311127, with a tan carrying case, was stolen from Kendrick Chamberlain on October eleventh. Mr. Chamberlain, whose address is 217 Pacific Electric Building, Los Angeles, California, advises that he will pay a liberal reward for information that will lead to its recovery.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

The I. P. A. Albums

You are interested in nature else you would not own a camera. You are interested in what is beautiful, else you would not be interested in nature. And nature is simplicity; everyday scenes of human interest, bits of picturesque landscape, the growth and development about us, all are a source of pleasure to the camerist.

You wish to enjoy more of this camera pleasure the coming year and to do so you may need to know more, photographically. One of the easiest ways of obtaining this knowledge and the consequent greater enjoyment is through association with other photographers who are interested just like yourself. This mingling, supplies the means of absorbing knowledge, and the best means of so doing is by becoming a member of the International Photographic Association and then taking advantage of its circulating albums. In this last the real opportunity lies. One sees the prints of others, some more and some less advanced than oneself. The former, one can learn from, the latter one can teach, both being done with no apparent effort; but, the requisite small effort applied, twofold benefit results. Isn't this fine?

And again, in the circulation albums one sees the real work of his fellow members, thereby learning who does the class of work he desires, and a correspondence and exchange can be mutually agreed upon with advantages to both. Nothing could be better and all to one's advantage and further success.

There are no "strings" attached to a membership. The following of the few rules and the assuming of the trifling expense connected with forwarding the albums to the member next on the route list, this last a matter of only a few pennies per album. One must, of course, be represented in each album to assure receiving it. One dollar covers the dues for one year and also pays

for a year's subscription to the official magazine, *CAMERA CRAFT*, which alone is full value for your money.—**LOUIS R. MURRAY**, I. P. A. 1391, New York Album Director.

Officers of the I. P. A.

F. B. Hinman, President, Room 4, Union Depot, Denver, Colorado.

J. H. Winchell, Chief Album Director, R. F. D. No. 2, Painesville, Ohio.

Fayette J. Clute, General Secretary, 413-415 Call Building, San Francisco.

James B. Warner, Director Stereoscopic Division, 413-415 Call Building, San Francisco, Cal.

NOTE.—All stereoscopic slides sent to Director for the circulating sets must be mounted, titled, and show the maker's name and I. P. A. number on the back of mount. Notify the Director how many mounts can be used, and a supply will be sent you by return mail.

Charles M. Smythe, Director Post Card Division, 1160 Detroit St., Denver, Colo.

NEW MEMBERS.

- 3701—Mrs. C. H. Larson, Greeley, Neb.
3½x5½, developing paper, of scenery local and from trips taken, also miscellaneous views; for scenery and miscellaneous. All on paper, no post cards. Class 1.
- 3702X—Joe R. Forkner, Box 204, Missoula, Mont.
4x6 and post cards, developing paper, of Mount Rainier scenes, Seattle, Wash., and Montana views; for speed pictures and views, general subjects any kind. Class 1.
- 3703—W. C. Brass, Montalvo, Cal.
Class 2.
- 3704—Lou Anderson, Blandinsville, Ill.
Class 3.
- 3705—Arthur S. Evans, 47 Genesee St., Utica, N. Y.
Class 3.
- 3706—J. R. Beatty, M. D., Butte, Mont.
Class 2.
- 3707—C. Flora, South Charleston, Ohio.
4x5, 5x7 and lantern slides of some Ohio historical subjects; for some slides or glossy prints from negatives of national historical places, after correspondence only. Class 1.
- 3708—Herbert L. Sackett, Lewistown, Mont.
Class 2.
- 3709—Stanley Mallory, 340 Logan St., Brooklyn, N. Y.
Class 3.
- 3710—Baron De Hirsh Meyer, Brillion, Wis.
3½x5½ and 4x5, developing paper, of groups, individuals, and scenes; for the same. Post cards and 4x5 prints. Class 1.
- 3711—J. F. Rambo, 1235 W. 2d St., Pomona, Cal.
Class 2.
- 3712—E. D. Lakeport, Box 144, Junction City, Ore.
5x7, developing paper, of landscapes and Cascade Mountain scenery; for Eastern land-

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- scapes and views of the Adirondacks and White Mountains, also sporting scenes. Unmounted 4x5 and 5x7 views. Class 1.
- 3713—Thomas R. Quaife, 60 Grove St., Hion, N. Y.
2½x4¼, developing papers, of landscapes and water scapes, but principally home views; for land and water scapes. Class 1.
- 3714—Malcolm W. Chinnery, R. F. D. No. 3, Scottville, Mich.
3¼x4¼, developing paper, of river and lake scenes; for mountains and city scenes. Class 1.
- 3715—O. A. Sharpless, 225 Oak St., Atlanta, Ga. Class 2.
- 3716—Patten Bros., Cylinder, Iowa.
5x7 and post cards, various papers, of lake views, rivers, flashlight portraits, threshing scenes, farm stock and farm scenes, also orchard views; for general views of interest. Only good work sent and accepted. Class 1.
- 3717—Max M. Dean, Free Soil, Mich.
5x7, developing papers, of landscapes, public buildings, and animals; for the same. Post cards only. Class 1.
- 3718—Vivian Staples, 101 W. Superior St., Duluth, Minn.
3¼x5½, developing paper, of scenery and outdoor views; for the same. Class 1.
- 3719—F. F. Jansen, 721 St. Ferdinand St., New Orleans, La. Class 2.
- 3720—Dr. M. F. Parrish, Monroe, Ind.
3¼x5½, developing paper, of landscapes, rural and farm scenes, also children; for good prints of educational real every-day life, rural, farm and stock, flowers, and comies. Class 1.
- 3721—W. T. Wright, 594 Carroll Ave., St. Paul, Minn.
3¼x4¼ to 5x7, post cards and lantern slides unbound, developing papers, of landscapes, waterfalls, rivers, animals, snow scenes; for waterfalls, sea views, mountain scenes, etc. Only good work sent or accepted. Class 1.
- 3723—Mrs. M. E. H. Vollmer, S. Walnut St., Bucyrus, Ohio. Class 2.
- 3724—R. R. Hutchinson, Endicott, Wash.
Any size, developing paper, of scenic, mostly harvesting; for anything of general interest. Class 1.
- RENEWALS.
- 276—I. N. Morrill, Box 13, Danbury, Wis. Class 3.
- 344—J. E. Whitmore, Box 75, Scranton, Iowa. Class 3.
- 1039—Harrie A. Holmes, Greenland, N. H.
Views and portraits; for portraits only, no others accepted. Class 1.
- 2076—H. J. Becker, 1249 Fourth Ave., Cedar Rapids, Iowa. Class 2.
- 2095—Gustav G. Stortz, 2121 Germantown Ave., Philadelphia, Pa.
3¼x5½, various papers, of camp and athletic scenes, also miscellaneous; for miscellaneous and some historic. Good work only. Class 1.
- 2404—A. E. Fvall, 40 Hastings St., West, Vancouver, B. C., Canada. Class 2.
- 2618X—George H. Webb, Columbiana, Ohio. Class 2.
- 2979—Prof. W. H. Waggoner, Eureka, Ill. Class 3.
- 2988—H. M. Sutter, 3005 W. North Ave., Baltimore, Md.
2¼x3¼, 3¼x4¼, and 4x5, developing paper, of views, no photos; for the same. Only good sharp and clear prints wanted. Any one desiring to exchange lantern slides, please write. Class 1.
- 3024—Franklin F. Wells, 27 So. Oakley Ave., Columbus, Ohio.
Post cards, 4x5 and 5x7, various papers, of river, park, lake, railroad and street scenes, also miscellaneous; for the same, also mountain scenery. Only good work sent and accepted. Class 1.
- 3385—Charles I. Reid, Box 510, Millersburg, Pa.
5x7, 11, O. P., and enlargements, post cards and lantern slides, of news pictures and pictures used for illustrating articles, aeroplanes, new inventions, manufacturing processes, natural history subjects, freaks and almost any subject; for the same. Especially desire pictures that can be used for illustrating articles and will exchange right to use pictures for this purpose. Good work desired and sent, but will answer all. Class 1.
- 3416—Leslie L. Long, 102 Chicago Blvd., San Antonio, Texas.
5x7, developing paper, of arid and semi-arid plant life, cacti and cactus blossom, all classified, birds, nests, and small wild animals; for similar studies or other interesting subjects, preferable in sets of six or more. Correspondence desired before exchanging. Class 1.
- 3452—Ed A. Shepard, Oakland, Iowa.
3¼x5½ and smaller, printing-out and developing papers, prefer single weight, of Iowa State College at Ames, local town views and landscapes; for Southern California, foreign, agricultural, home life, marine and mountains. Good work and interesting subjects sent and expected. Class 1.
- 3453—Herbert Knauf, Canfield, Ohio.
4x5 and 5x7, developing paper, of scenery; for the same. Class 1.
- 3467—Rev. Paulus W. Weber, Box 87, Crivitz, Wis.
5x7, 3¼x5½, 2¼x4¼, post cards, developing papers, of landscapes, river views, still life, animals, etc., also complete set (40) Niagara Falls views and a few from Buffalo, N. Y. Only good work desired and sent out, with privilege of returning undesirables. Class 1.
- 3499—Max Gartner, 42 W. Dayton St., Pasadena, Cal.
5x7, 4x5, 2½x4¼, 3¼x4¼, 3¼x3½, various papers, of landscapes, residences, public buildings, forest fires, fire apparatus, marines, and beach views; for anything of interest. Only good work sent and expected. Class 1.
- 3687—A. Grootenboer, 414 North 10th St., Paterson, N. J.
(By error printed as Paterson, N. Y., in our August number.)
3¼x4¼, and 4x5, developing paper, of bits of woodland scenes in and around towns; for the same; prints mounted and unmounted. Class 1.
- 3707—Cashard Flora, South Charleston, Ohio. Class 2.
- CHANGES OF ADDRESS.
- 1921—G. T. Simmons, Columbus, Mont.
(Was Laurel, Mont.)
- 2092X—Robert Greethurst, Utica, Minn.
(Was Lewiston, Minn.)
- 2120—Arthur E. St. Clair, Yale Station, New Haven, Conn.
(Was Claremont, Cal.)
- 2171—Martin Graf, 1602 East Sprague Ave., Spokane, Wash.
(Was Metairie Falls, Wash.)
- 2479—Mrs. Lois E. Gundelach, Home, Ore.
(Was Huntington, Ore.)
- 2818—P. R. Johnson, 2302 Long Ave., St. Paul, Minn.
(Was Saxton River, Vt.)
- 2886—Sadie L. George, care Shattuck-George Iron Co., Wichita, Kan.
(Was Foxton, Colo.)
- 3144—A. D. Miller, 1062 Union Ave., North, Portland, Ore.
(Was 937 E. 12th St., North.)
- 3473—George B. Propp, Concordia Seminary, St. Louis, Mo.
(Was Echo, Minn.)
- 3501—W. A. Cooper, Montclair Academy, Montclair, N. J.
(Was Plymouth, Mass.)
- 3690—Ralph M. Howell, Pastor, Box 275, Mitchell, S. D.
(Was Vivian, S. D.)
- 3696—Harry J. Hunt, Cuyahoga Falls, Ohio.
(Was Akron, Ohio.)

CLUB NEWS AND NOTES

Wanamaker's Ninth Annual Exhibition

The Ninth Annual Exhibition of Photographs, held by John Wanamaker, Philadelphia, will open on March second and close March thirty-first, 1914. The closing day for entries will be February fourteenth. Quoting from the prospectus just to hand:

"The purpose of our annual Photographic Exhibitions is to stimulate the love of the beautiful inherent in every one. To the thousands of camera users who often make pictures aimlessly, we wish to give the thought: Why not study some of the rules of composition, and observe the harmonies of light and shade, think a little, and make pictures that are worth while?"

"Photography, as a means of expression possesses many peculiar advantages, and should be used for original work rather than to imitate paintings. An original thought properly expressed, or something in everyday life, shown from a fresh point of view, is what the thinking public desires.

"Either amateurs or professionals may send pictures. Prizes are awarded according to merit, pictorial qualities being preferred to technique. The judges will decide the merit of each picture as they would an exhibition of paintings or sculpture. Eighteen prizes will be awarded, and as many ribbons of honorable mention as the judges find worthy. The first prize will be one hundred dollars; the second, fifty; the third, twenty-five; five of ten dollars each, and ten prizes of five dollars each."

Copies of this prospectus, giving full details, can be secured by addressing: Photographic Exhibition Bureau, John Wanamaker, Philadelphia, Pennsylvania.

Chicago Camera Club

The Club has been especially fortunate in coming through the efforts of B. J. Morris, past Director, an extremely fine exhibition of pictures by Paul Lewis Anderson, of East Orange, New Jersey. As an inspiration to work and as an insight into artistic possibilities with the camera, these photographs are well fitted. Amateurs are to be congratulated for having this privilege of study and

enjoyment. The exhibition was open to the public without charge, Thursday evenings and Saturday afternoons during October.

Dudley Crafts Watson and Francis Harmon with their splendid illustrated lectures received enthusiastic reception. These two lectures were the features of the program last month.

The sale of photographic equipment and supplies on October 16 was really a market place where apparatus no longer needed could be disposed of, and needed equipment purchased at very low prices. Members and friends availed themselves of the opportunity and took advantage of the bargains offered.

The Club extends a cordial invitation to every interested amateur to attend its Thursday evening meetings, held at the rooms, 329 Plymouth Court.

Lens and Brush Club

The Seventh Annual Exhibition of the Lens and Brush Club of Northampton, Massachusetts, will be held December twenty-fourth to thirty-first, inclusive. An invitation is extended to all pictorial workers to participate and an entry form will be gladly sent to such as may apply therefor. Pictures must be framed and delivered carriage paid to the Secretary, 12 Bedford Terrace, Northampton, Massachusetts, on or before the twelfth day of December. No entrance fee is charged, a jury will pass upon all entries, and the judges will award ten certificates of merit. The exhibitions held by this Club in the past have been of such a degree of merit that pictorial workers should feel honored by having their work accepted at this coming one, and doubly so should one of the certificates of merit be carried off.

The Glendale Camera Club

The Glendale Camera Club, of Brooklyn, New York, organized on February sixteenth, 1913, is desirous of increasing its membership. Applicants, wishing to enroll, may address communications to H. Paetow, president, 1909 Myrtle Avenue, Brooklyn, or to J. Heim, secretary, 4 Sophie Street, Maspeth, Long Island, New York.

OUR BOOK SHELVES

"Sonny Boy's Day at the Zoo"

This is the title of a handsome quarto of jingle verses by Ella Bentley Arthur, made distinctive by the fact that the illustrations, some seventy-five not including the initials, are all photographic, all excellently done, and all interesting and satisfying to the child reader who is somewhat unconvinced by the more common and conventional drawings. Aside from its high educational value in the hands of a child, it will prove more than interesting to our readers on account of the forcible presentation of the merits of camera work as a means of illustrating books. Many of our readers have given this application of photography some thought if not actual effort and this book will do much to help them as showing what can actually be done along this line. We can assure our readers that the following quotation from the announcement of the publishers is perfectly justifiable. They say: "These photographs have been made with absolute truthfulness to the actual breathing reality, and mark one of the finest collections of pictures of denizens of the wilds ever taken. The lion, the tiger, the

ostrich, the elephant, the hippopotamus, the giraffe, the buffalo, etc., are shown just as they are." The book is published by The Century Company, New York. Price ninety cents net, postage ten cents.

"Platinum Print"

The above is announced as published to serve the needs of men and women whose delight is in the use of the camera as a personal expression. In the beginning it will be of modest size: maintaining high ideals. The first number will contain reproductions from platinum prints by: Clarence H. White and Alvin Langdon Coburn as photogravure insert, and others by Charles B. Denny, Francesca Bostwick, Charles H. Barnard, Edw. R. Dickson and H. H. Moore. The articles will be: Photographic Representation of Motion, by Paul L. Anderson, and Multiple Platinum Printing, by Karl Struss. It will be issued October first, 1913. Printed on cameo plate paper, size 8x10 inches, sixteen pages. Edition limited to five hundred copies. Price fifteen cents by mail. Edward R. Dickson and Charles H. Barnard, editors, 132 Madison Avenue, New York.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported by William Wolff

Ray Winter, of the Multnomah Photo Supply Company, has won the medal as champion one-half ounce caster of the West.

Mrs. Swope, of Astoria, has a very cozy and well appointed studio.

Mr. McMann, Manager Northwestern Photo Supply Company of Seattle, contemplates a trip to San Francisco.

Edward Turnell, formerly with Wilson Book Store at Seattle, now has charge of the Kodak Department of the Owl Drug Store in Portland.

John Playeman, one of the Oregon Camera Club's A1 members, showed the writer some very fine work done with his No. 0 Graphic.

W. H. Parker, of Salem, Oregon, made some fine circuit pictures at the Oregon State

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and was awarded many blue ribbons for its work.

C. F. Clifford, of Albany, Oregon, has fitted a Survey Arrastray Ground to his already well appointed studio.

Probus Print Lustre has already taken hold and in short time will be as popular as Probus print.

Richardson, the Premo order getter, must have an interest in a certain Portland cafeteria. He shows everyone to the place.

The New Mandel-ette Camera

The attention of our readers is called to a new advertisement, that of a new one-minute camera, the "Mandel-ette," that appears in this issue. This little camera is one that will interest amateurs and others who may not have the knowledge of photographic manipulation necessary to operate the regular camera, for the reason that the picture is made and finished directly in the developing chamber, which is loaded with sixteen or fifty cards, one always being in position to receive the picture. It is just the thing for the picnic, the day at the beach, the vacation; in fact, it will supply an endless amount of pleasure and interest that cannot be derived from the usual apparatus, which necessitates waiting until at least the next day before the results can be enjoyed. The positive cards are very moderate in price, and the three-in-one solution, all that is required to finish them, is quite inexpensive. Look up the advertisement and write the makers for a descriptive booklet. The firm has been in the business of making penny picture and like outfits, using ferro-type plates, for years, so that this new model giving positive pictures direct on a card is backed up by their long experience and knowledge of what is required.

A New Firm, Some New Lines

We are pleased to announce the entrance of a new firm of dealers into the field of high-grade photographic apparatus, the firm of Allison & Hadaway, of 235 Fifth Avenue, New York. This new firm are importers of Marion & Company's cameras, plates, etc.; Newman & Guardia cameras, Newman & Sinclair cameras and moving picture apparatus, and will import any make of foreign cameras desired. The firm manufactures the Panchroma flash powder so successfully used in making anachromes and other color pictures and also makes a specialty of develop-

ing and retouching these color plates for the trade. This special Panchroma flash powder has been made and used for a number of years, and will be found eminently suited to the special work for which it is intended. With their new field of high-grade cameras and supplies, they are fast earning an enviable name through their keen interest in the satisfaction and success of their customers, and our readers will do well to get into touch with them, asking for a copy of the special announcement they are now sending out.

Result of New Tariff

Square Deal Willoughby of 810 Broadway, New York, has made substantial reductions all along the line on account of the new tariff which went into effect October fourth. These new prices will be found in his bargain list No. 123, which is now ready for distribution. Our readers will do well to write for a copy at once as it contains a large number of bargains, some of which are sure to interest.

Those Home Groups

A lot of pleasure, immediate and future, can be derived from making photographs of those gatherings in your home. Actino Flash Cartridges insure correct illumination and are very convenient to use. You will be surprised at the small amount of smoke they make. They are manufactured by the makers of the Victor line of flashlight specialties, the James H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, Illinois.

Penrose at the International

At the International Graphic Arts Exhibition recently held at Amsterdam, Holland, Messrs. A. W. Penrose & Co., Ltd., of 109 Farringdon Road, London, E. C., England, received the highest award for their exhibit of a complete photo-engraving plant, which was shown in operation by the firm of L. Van Leer & Co., Amsterdam.

An Interesting Test Chart

A new and unusually interesting test or "ability" chart has just been issued by Allison & Hadaway, 235 Fifth Avenue, New York, and is sent free upon request. The design, consisting of various geometrical figures, is printed in a number of peculiar colors, and through its use, the ability of the photographer is ascertained as well as enabling him or her to test the qualities of the lens used.

NOTES AND COMMENT

To increase the interest in the modern methods of Chromatic Photography, the firm will buy a print from the best negative made of the Ability Test Chart, offering the sum of twenty-five dollars for it. There are no restrictions in the offer and in the event two prints of equal efficiency are received, the prize will be equally divided. Print should reach them before January first, nineteen fourteen.

The Caywood Flash Lamp

A most convenient and effective means of securing flash-light pictures is offered in the Caywood Lamp, illustrated herewith. It is sent prepaid upon receipt of one dollar, and with it is sent a box of assorted cartridges. It is being offered by the makers of the Caywood line and the buyer is therefore assured of a dependable piece of apparatus. Address your orders to E. S. Caywood, 1309C Walnut Street, Philadelphia, Pennsylvania.



Making Good Negatives

There is a world of satisfaction in having negatives which will give strong, pleasing prints. However, it is not always the good fortune of the camera owner to obtain the negative quality best suited to productive results. That weak film or plate which gives you faint, worthless prints can be brought into the printable class if you use Victor Intensifier. A practical demonstration of what this intensifier will do is shown on our advertising pages. Your dealer sells Victor Intensifier, but if he happens to be short in his supply you can get it direct from James H. Smith & Sons Company, 354 Cottage Grove Avenue, Chicago, Illinois.

A New Printing Medium

The attention of our readers is called to the new advertisement of Photoloid that appears in the advertising section. Photoloid consists of an extremely rapid and sensitive waterproof emulsion coated on a backing of Fiberloid. This last is a cellulose compound, very tough and flexible as well as absolutely unaffected by chemicals. The result is a printing medium that is not open to the objection of curling during or after manipulation, and

as it does not absorb chemicals the danger of future fading and other loss of permanency is entirely avoided. The prints closely resemble carbon work and as they are waterproof they can be easily washed when soiled from handling.

We would advise all our readers to investigate this new printing medium by sending to the manufacturers for a package and giving it a careful trial. The cost is, of course, considerably higher than that of ordinary printing paper, but we believe that the superior results will justify the higher price in the eyes of those workers who are appreciative of the best work. Address the Fiberloid Company, 55 Fifth Avenue, New York, and send them the price of at least a small package for trial.

Photo Dealers' Convention

The far-sightedness of co-operative effort has been demonstrated so often in other lines that every one allied with the photographic industry will welcome the report that arrangements for the Convention of the Photographic Dealers' Association of America to be held March twenty-fourth to twenty-seventh, 1914, at the Hotel La Salle, Chicago, are progressing rapidly.

Already numerous firms have signified their intention to exhibit, and judging from their standing in the trade, it is a foregone conclusion that this coming Convention will go down in the annals of the Association as one that accomplished much for the interest of the trade in general.

President Charles H. Huesgen, of the Association, in a recent interview stated that manufacturers and dealers alike cannot help but profit by the stimulus to the business which this coming Convention will provide.

Dealers should send in their applications for membership at once. This important matter should receive your immediate attention. Write to any of the officers for a copy of the new constitution and by-laws and application blanks adopted at the first Convention held in Rochester last March. The officers of the Association are as follows: President, Charles H. Huesgen, 456 Fourth Avenue, New York; First Vice-President, E. H. Goodhart, 22 Central Avenue, Atlanta, Georgia; Second Vice-President, H. M. Fowler, 806 Huron Road, Cleveland, Ohio; Third Vice-President, W. P. Hallam, Jr., 17 Fourth Avenue, West Du-

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luth, Minnesota; Fourth Vice-President, E. M. Hendkamp, 56 West Randolph Street, Chicago; Secretary, William Hartman, 623 East Thirty-seventh Street, Brooklyn, and Treasurer, George L. Kolme, 602 Summit Street, Toledo, Ohio.

For Fine Enlargements

Chloralla Contrast paper for enlarging has been given ample test by some of the largest finishers throughout the country, who have found it to afford them the opportunity of securing enlargements with just the tones and snappiness that is most desired. It would be well worth our readers' while to send a postal to G. Gennert, 24-26 East Thirteenth Street, New York, for samples of Chloralla Paper, which will be cheerfully sent on application.

For making enlargements the Improved Soldak is a well constructed piece of apparatus with which it is possible to secure the most pleasing results. Fitted with the Sylvar lens and the Soldak focusing scale, it is practical, by a simple method of adjusting pointers at two points, to secure the desired number of times enlargements without the necessity of going through the operation of focusing, which the beginner, and often the advanced worker, finds very tedious. Full information concerning this camera can be secured of the above named firm.

Illinois College of Photography

Miss Florence Allen, who has been convalescing from a serious operation at St. Anthony's Hospital in this city for several weeks past, has returned to her home and will soon engage in the photographic business. She had finished her course at the college before undergoing the operation.

Mrs. Bissell entertained the students at a very pleasant reception at Garnet Hall last week. Some excellent musical numbers were rendered by students and friends from the city and every one had an enjoyable evening.

The students are getting out an annual, which will be ready for distribution about Thanksgiving. It will be unique as a college annual in that all the illustrations and engravings as well as the literary contents will be college work. The printing and binding only will be done outside. As this will be the first number of the annual, a list of all former students, as nearly complete as possible, with brief biographical notes,

will be included. Any former students who can give information of this nature will please communicate with C. Van Deusen Rogers, this city.

The College Camera Club held a contest last month and a partial exhibit of the *Photo Era* Prize Pictures. The rest of the pictures will be on display at their rooms next week. Mr. Holzmueller won all the prizes at the members' contest.

The graduates for the past month were: Miss Lora Bingman, Miss Belle Kellerman, Jas. E. Colanero, Oliver Hartman, Ralph M. Harford, Clay Burkhardt and V. D. Morris.

Jos. A. Rengle, student of 1911, visited the College last month. Mr. Rengle has been working for the last year in an engraving plant in Mobile and was en route to Chicago where he has a new position.

Bau Ching Cha and F. M. Gork spent a week of the past month at Champaign, Illinois, where they attended the National Conference of Chinese students of America, held at the Illinois University.

Verne Morris and Miss Anita Michovsky, students of the past spring and summer, were married last month and departed for Mr. Morris' home where he will engage in the photograph business.

Statement of the ownership, management, circulation, etc., of CAMERA CRAFT, published monthly at San Francisco, California, required by the Act of August twenty-fourth, 1912.

Editor, Fayette J. Clute, San Francisco, California. Managing Editor, Fayette J. Clute, San Francisco, California. Business Manager, Fayette J. Clute, San Francisco, California. Publisher, Fayette J. Clute, San Francisco, California. Owner, Fayette J. Clute, San Francisco, California. Known bondholders, mortgagees, and other security holders, holding one per cent or more of total amount of bonds, mortgages, or other securities, none.

(Signed) FAYETTE J. CLUTE.

Sworn to and subscribed before me this twenty-fifth day of September, 1913.

Sid J. Palmer, Notary Public, in and for the City and County of San Francisco, State of California. My commission expires December thirty-first, 1914.

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SAN FRANCISCO
CALIFORNIA

Where does it go?

The Cyko paper plant is the second largest in the world.

It's the most modern and best equipped.

It makes Cyko paper and nothing else.

Its batteries of coating machines spread the carefully compounded and sensitively blended Cyko emulsion, day and night—

Yet the hue and cry is

“We cannot get enough

C y k o P a p e r

Where does it go?”

It goes wherever good photographs are made, from Maine to California, and from Alaska to Cape Horn. It's on sale everywhere—in Europe, Asia and Africa. It follows the world-wide cry for a good, dependable and permanent photo-printing medium.

AnSCO Company

Binghamton, N. Y.



THE EMPRESS, DENVER
LIGHT RAIN FALLING
By Smyth & Hickish
See Article page 557


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CRAFT


A PHOTOGRAPHIC MONTHLY**FAYETTE J. CLUTE, Editor and Proprietor****CALL BUILDING****SAN FRANCISCO****CALIFORNIA**

VOL. XX**DECEMBER, 1913****No. 12**

A Convenient Enlarging Apparatus**By J. A. Bried**

With Illustrations by the Author

The construction of an enlarging apparatus presents no difficulty to the worker who possesses the ordinary ability to use a few simple tools, yet many photographers deny themselves the advantage of an equipment for making bromide enlargements simply because of the great amount of space that the heavy easel and track usually require, space that is not generally available in the average dark-room. Of course, one can set aside another room for the purpose, but the photographer who desires to make only an occasional enlargement does not take kindly to the idea of tying up so much space.

The enlarging apparatus that I will describe in this article is one that was designed by me to overcome these objections just mentioned, and with the further object in view of having at hand an arrangement for making bromide enlargements that would be ready at a moment's notice, yet be firm and stable enough to make its use convenient and free from the annoyance attending the use of such apparatus as is generally designed for occasional or temporary use.

This improved device consists essentially of a hinged drawing board or easel which is hung from a frame equipped with a couple of rollers working upon a track carried by a board nailed along one side of the dark-room wall. This permits the hinged or swinging easel to roll backward or forward.

The photographic reproductions herewith show the apparatus as placed in the dark-room of the Meese & Gottfried Machinery Company, of this city. This firm employs photography very extensively in the selling end of its business and occasionally requires enlargements of photographs and drawings. The problem was to construct a serviceable apparatus that could be used in the only available

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space for the purpose, the space directly in front of the working bench and the two large sinks that extend the length of one side of the long, narrow room. Some idea of the confined situation in which this apparatus is located can be obtained by observing the raised window shutters shown at the top of these pictures, the corner shown being that of one of the four which are lowered in a position to close the four large windows over the work bench and sink just mentioned, when the room is employed for usual dark-room work. These shutters were raised in order to get light for the making of the three pictures reproduced herewith, and while they are usually allowed to remain lowered in position



"EASEL THROWN OUT INTO POSITION"

over the windows, they can be quickly raised, as shown, in order to permit of thoroughly lighting and ventilating the room whenever it is not in actual use as a dark-room. A plan of the end of this room is shown in Fig. 1.

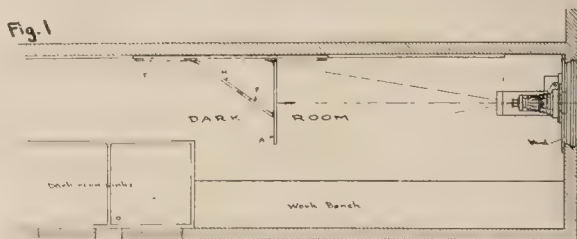
The first photograph shows the easel thrown out into position for use, as it appears from the rear side. It also shows very clearly the frame on which it swings and the board carrying on its upper edge the metal track on which the ball-bearing rollers run, permitting the frame to slide quite easily to any desired distance from the camera on the other side.

The second photograph shows the same easel folded back against the wall, where it occupies only a space the

thickness of three boards, those which make up the track supporting the sliding frame itself, and the easel. In the photograph the camera is shown in position, and it might be explained that the shelf upon which it rests also folds out of the way, downward, when the camera is not in use for enlarging.

The third photograph shows that this support or shelf for the camera is double and that the upper portion can be instantly swung to one side to enable

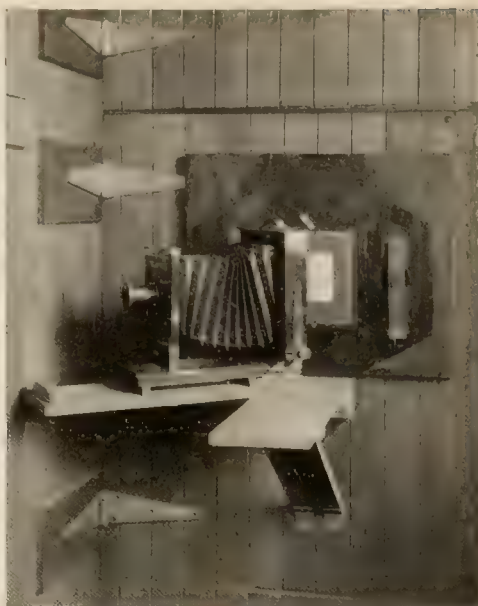
easy access to the negative holder when it is desired to change or adjust the



A CONVENIENT ENLARGING APPARATUS



"EASEL FOLDED BACK AGAINST WALL"



"SUPPORT OR SHELF FOR THE CAMERA"

negative being used behind the camera. This swinging adjustment is achieved by the simple expedient of boring a half-inch hole through what is the farthest left-hand corner (as one stands facing the camera) of the bottom shelf, and equipping the same corner of the upper or swinging board with a short wooden peg approximately of the same diameter. This peg in the upper board is engaged by the hole in the lower one and of course the camera can be instantly thrown to one side by simply turning the upper or camera-carrying board on this pivot. This construction is clearly shown in Fig. 3 herewith.

I should also call attention to the negative carrier, which is clearly shown in the last photograph, as well as in Fig. 5. This consists of a board containing an opening in the center that is rabbitted out to take an ordinary plate-holder kit as shown, the negative being placed in this kit; or, in the case of small sizes, being placed in a smaller kit which in turn fits into the large one. As photographed, the large kit contains a small film negative behind an orange paper mat on a $6\frac{1}{2} \times 8\frac{1}{2}$ sheet of clear glass. The principal features of this negative carrier are the two adjustable spring clamps, one at each side, the one at the right hand being plainly shown. These consist of two brass springs bent into the shape of the ones usually used in the back of a printing frame. These springs are held in position by thumb-screws through their center into brass posts three-fourths inch in diameter, which posts pass through the large, round holes in the two ends of the negative carrier. These holes being about three inches in diameter, it can be plainly seen that by shifting the board about one can secure an adjustment of nearly three inches in any direction, enabling the operator to raise, lower, shift or straighten subject matter on the easel without disturbing the camera or focus. I might add that the wooden back that supports this adjustable negative holder is faced with a piece of black felt to

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prevent light passing between, this back being fastened, by screws, over an opening in one of the wooden shutters which close the window at that end of the room. The outer side of this opening in the shutter being fitted with a piece of fine ground glass. The only other detail that need be mentioned is that, when in use, the focusing cloth is placed over and around the back of the camera in order to prevent light entering the room from the clearance space between camera back and negative carrier.

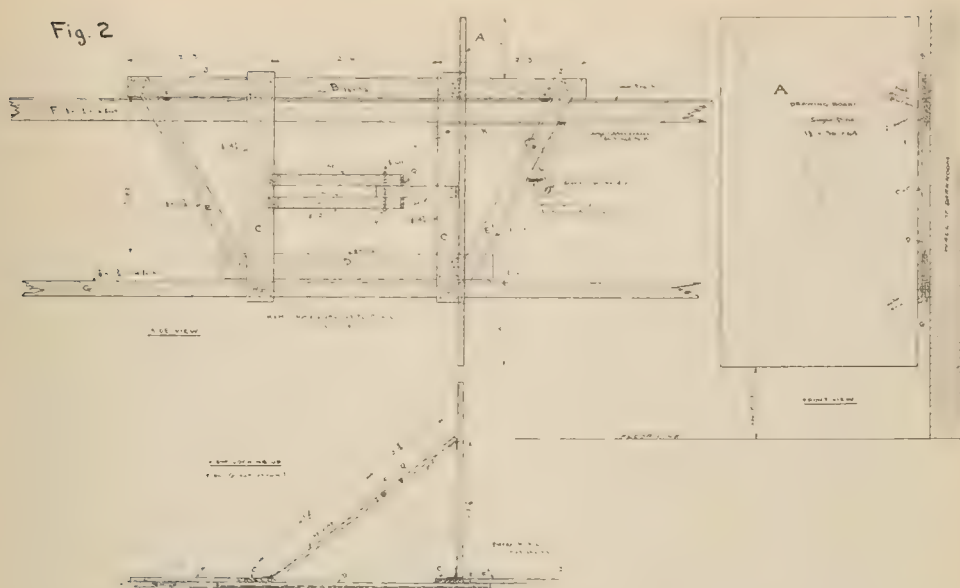
With this brief description I believe it will be necessary only to give the reader a few explanations of the drawings herewith showing the construction of the easel and carriage upon which it moves, in order to make the construction of a like apparatus a simple matter to the photographer who may wish to avail himself of a like equipment. Fig. 1 shows the general plan of the device in position in the dark-room. It shows the board or easel A on which the bromide paper is fastened, hinged to a frame B that is carried by rollers working on track F attached to the wall. M and P form the jointed folding strut, hinged at its two ends, which holds the easel in position when turned out at right angles to the wall, as shown.

The detail drawing, Fig. 2, shows the construction features of the sliding easel, the automatic clamp that holds it in any position, together with those of the folding strut. While these drawings may make the apparatus seem complex to some, its construction, on the contrary, is exceedingly simple, requiring only about two hours' time and an expenditure of less than two dollars for standard hardware, fittings, nails, etc., outside of the few boards used. The drawing calls for an easel or drawing board 36x64 inches, but of course this may be changed to suit conditions or requirements. In this drawing only two of the hinges that connect the easel A with the sliding frame piece C1, are shown. Three should be used, and these should be the three and one-half inch size. The lower rollers, H and H1, the upper two, J and J1, the track on which the latter run, the three hinges for the board, three smaller ones for the strut, the bolt, catch Q used on same, and the two short bolts used on pieces L and K, complete the list of hardware, with the exception of the screw-eyes and door bumper on the automatic clamp. This last is also a handle for moving the easel backward or forward when it is grasped and raised to the position shown in dotted line. Letting go of this door-stop handle allows the heavy rubber bands to pull it down and clamp the frame firmly at the desired position on the tracks, which is accomplished by the end of lever L being formed to force the piece K up against the track supporting piece F. A large firm rubber eraser being nailed to the end of K as shown, makes the action of the brake absolutely positive, without any danger of the board slipping when paper is being tacked thereon.

The only part of the construction that requires special attention is the correct placing of the bolt connecting P with M and M1 to form the folding strut. Following the dimensions given in the detailed drawing of this feature will assure its being correct except as the hinges obtainable for the ends may vary slightly in thickness from those I have used and on which these drawings are based. If, after attaching the hinged strut, the board or easel does not

A CONVENIENT ENLARGING APPARATUS

Fig. 2



come into position at a perfect right angle to the frame, the hinge on the easel may be blocked up a little with one or more thicknesses of cardboard or it may be let slightly into the wood, as demanded. A better plan would be to attach the three members of the strut, M, M1 and P, by their hinges in the position shown, before drilling the hole for the bolt R. Then, by turning the easel back to bring the strut properly folded, make a mark across the three members at approximately the position given for the bolt, and then, with the easel swung out at exactly a right angle, the mark on long and short end of strut will probably no longer coincide and a point half way between the shifted lines will be the correct position of the bolt. As indicated by the dotted arcs, the length of M and M1 should not exceed the distance between C and C1, and it should be made about half an inch less to allow space for little latch bolt, Q. These arcs thrown from the center of the hinges also show the method of locating the position of the bolt should the maker wish to employ different dimensions in constructing a like piece of apparatus.

Fig. 3

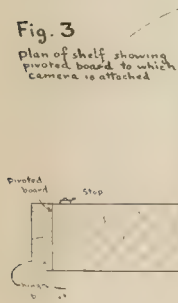


Fig. 4
Detail of
Spring and
Post.



Fig. 5

Adjustable K holder
or angle or carrier

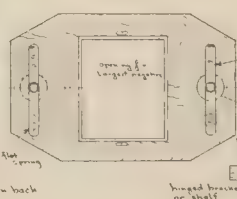
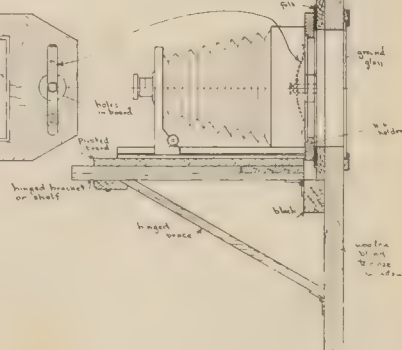


Fig. 6

Elevation of adjustable
K holder and camera
in position on bracket



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It is hardly necessary to explain either the drawings or the photographs further. The letters on the former are made to correspond to corresponding parts on the several sketches so that no confusion can possibly arise. The lumber list is as follows: A, drawing board $1\frac{1}{8} \times 36 \times 64$ inches; B, one piece $1\frac{1}{8} \times 3\frac{3}{4}$, seven feet long; C and C1, two pieces, $\frac{7}{8} \times 4\frac{3}{4}$, three feet six inches long; D, one piece, $\frac{7}{8} \times 4\frac{3}{4}$, four feet two inches long; E, E1, K and L, one piece, $\frac{7}{8} \times 2\frac{3}{4}$, twelve feet long; F, one piece, $1\frac{1}{8} \times 3\frac{3}{4}$, sixteen feet long; G, one piece, $\frac{7}{8} \times 2\frac{3}{4}$, fourteen feet long, and M, M1 and P, one piece, $\frac{7}{8} \times 2$, seven feet long. All except the twelve-foot piece forming E, E1, K, L, M, M1 and P are exact finished and require no further cutting. The drawing board easel should be sugar pine or spruce in order that push pins may be easily inserted.

A photographic portrait of a man is more accurate than a painted portrait, in one sense, and it is very much less accurate in another. The photograph accentuates nothing. Each button on his shoes is as sharp and clear as the lashes over his eyes. But artistically, the interest centers in his face, and the rest should be subordinated to that. His shoes are comparable in interest to his eyes; they should not be comparable in optical influence. For this reason the painter gradually reduces his treatment as he gets away from the center of interest—whatever that center be, a man's face or a bit of landscape. The main theme is emphasized. The subordinate themes are kept subordinate. If it be a picture of an old mill, we know that the trees to right and left, and the cows to the rear—all the subordinate factors—are just as clear as the mill itself. Some of them may actually be higher in key (in color, that is) than the center of interest. But they must not be painted that way. A faithful reproduction of reality would be an artistic lie. It would be a "scene" and not a picture. It would no more be a picture of an old mill than it would be a picture of a cow or a tree or a fence. It would be nothing as a work of art, and it would be vastly inferior to a photograph for surveying purposes or for the use of a real estate agent.—HOWARD VINCENT O'BRIEN.



More About Night Photography

By Chas. M. Smyth



Photographs by the Author and Edward F. Hickish



A THREE SECONDS' EXPOSURE

should range anywhere from one to five seconds, depending, of course, upon the amount of artificial light surrounding the scene to be photographed; but if there are throngs of people in front of the camera, it will be impossible to catch a period of even that short duration when all are sufficiently quiet. The best opportunities are presented immediately after dinner and before the show houses have opened their doors, or while an act is in progress. There are not as many people to interfere at such times, and yet there will be enough to give some life to the picture instead of leaving it with that desolate appearance so suggestive of a deserted street.

NIGHT photography is no longer an uncommon branch of the photographic art. Pictures taken at night are often reproduced in illustrated magazines and displayed in the show cases of the commercial photographers, and there are occasionally included some excellent examples of this class of work. But pictures taken in the dark of night, showing the life and animation of a busy street are quite rare, while a night picture of such a scene, one showing the array of lights without an annoying blur about each individual lamp, is still more so. In the March last issue of this magazine, I described the methods I then used in obtaining night pictures; but at that time, I am sorry to say, I could not eliminate the effect of halation, a defect which it seemed impossible to avoid.

So far as exposure is concerned, I found it not a difficult matter, after setting my camera in position and by having a little patience, to catch occasionally a few moments when those in range of the camera seemed to become quiet for a sufficient length of time to allow me to make an exposure. The exposure

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In the rapid development of our larger cities and in the increased use of electrical illumination, the lighting of the streets and stores at night has shown wonderful improvement. The gaily dressed merry-makers and theater-goers, passing to and fro beneath the brilliant lights, the grotesque and dancing shadows, transforming the busy streets into a veritable fairyland.

In my attempts to record these, to me, most interesting scenes, I have experimented a great deal and find it not a difficult matter to get "snap shots," if supplied with the proper equipment. There are four requisites necessary: A focusing camera with ground glass, a rapid plate, a shutter which is automatic on the bulb exposure, and a good anastigmat lens.

As a rule, few animated objects remain stationary for a longer period than a few moments, and if an exposure of any length be attempted upon a subject including such objects, there is certain to be some evidence of movement in front of the camera, quite frequently enough to ruin the picture. This is particularly true of light-colored objects. The movement of a dark object will not be recorded upon the plate unless it should remain stationary for a moment, then move to another spot before the exposure is finished. With a little patience and by careful manipulation, one can make bulb exposures of from one to four seconds and get results that are suggestive of instantaneous exposures, through their freedom from "moved" effects. There are moments when but few of those on the street are in motion; not when the crowds are at their height, but shortly after the evening meal and before the theaters have opened their doors. At such times people are inclined to stand leisurely about, looking and waiting; and then, by watching, one can often catch a view at the opportune or critical moment. At the moment when a street car or taxicab stops for a passenger there will be from one to several seconds during which no apparent movement will be made by any one within range of the camera. If the operator is all ready, with camera focused, shutter set at bulb exposure, and hand on the release, he can open the shutter, hold it open until he sees some movement before him, and then instantly close it.

It does not take a great deal of practice to become proficient in catching these opportunities. They occur often and at many different points. It is essential to find a very bright locality where the lights are concentrated and where people are apt to congregate. One can, by searching about, find near it a secluded spot, such as behind a taxicab or a private auto left waiting by the curb; or in the entrance of a store with its doors closed for the night; in fact, any location where one can stand safely without fear of having his tripod jostled by those who pass, is a good place. After the proper viewpoint has been found, adjust the camera, focus it carefully to cover, with the sharpest possible definition, just the view wanted, and then wait. Here is where patience is a valuable asset. If, just when one thinks the opportune moment has arrived and he opens the shutter, there immediately occurs some decided movement which will spoil the plate, he should not become discouraged, but insert a new plate and try it again. One success is worth a dozen failures. It will be found that from one to three seconds is often long enough to give the plate sufficient exposure, while yet short enough to show no movement on the plate.

MORE ABOUT NIGHT PHOTOGRAPHY



EVEN A RATHER SEVERE ARCHITECTURAL SUBJECT TAKES ON AN ADDED CHARM WHEN PHOTOGRAPHED AT NIGHT



THE ISIS THEATER, DENVER
SEVEN SECONDS' EXPOSURE
Copyrighted 1913 by Smyth & Hickish



THE EMPRESS AND THE COLONIAL
FIVE SECONDS' EXPOSURE
Copyrighted 1913 by Smyth & Hickish

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Here is where my difficulty arose. With an exposure of sufficient length to show life and detail in the scene, the lights were, in most cases, over-exposed. With the best that I could do, the halation seemed intolerable. I endured only because I could not avoid. Some time ago my attention was called to a method of development for just such work, with the suggestion that I try it out. The formula was worked out by R. Williamson, M. I., M. E., of London, a member of the Royal Photographic Society of Great Britain. I have only the highest praise for the man who will devote the time and energy necessary to work out such a process and in turn give it to the photographic public, doing so for the love of seeing the art advanced. His so doing proves his possession of the spirit of true sportsmanship.

Looking over his description of the process, I was somewhat reluctant to try it, because of my limited experience in mixing special developers and handling them in a special manner; the requirements in this line causing his method to seem more difficult than it really turned out to be. I brought it to the attention of a friend here, Edward F. Hickish, a thorough chemist as well as an ardent amateur photographer, and he graciously volunteered to assist me. The results of our first attempt were sufficiently promising to show us the wonderful possibilities of the advised method of development. Instead of the lights being surrounded by annoying blur, they came out sharp and clear-cut. The photographs accompanying this article are the results of our subsequent attempts. I fear we have not yet found the plate that will best give us the



AN EXAMPLE OF FINE DETAIL WITH THE MINIMUM AMOUNT OF HALATION, AS SECURED BY THE METHOD ADVISED

MORE ABOUT NIGHT PHOTOGRAPHY



Introduced to show what can be done by developing as advised. The only light in the room was the one shown, lowered so as to come into full view.



Just enough halation around the lights to make the picture look convincing as a real night scene.

results we desire; the only one we have thus far experimented with requires a somewhat longer exposure than is desirable. We are anxious to experiment further with various other plates and papers; and, when we are satisfied as to the best methods of attaining the best results, we will be glad to give you the benefit of our experiments. We are still in the dark regarding the possible extent of our success, for we have not as yet had the pleasure of seeing either some of Mr. Williamson's accomplishments or of feeling that we have exhausted the possibilities along this line.

It is only fair to give here a brief outline of his formula and pass it on with the hope that some one may profit by it and possibly take another step toward the goal so many of us are striving to reach. Extracts from his formula as printed in the *London Photographic Journal* follow:

- | | | |
|--------|----------------------------------|----------------------|
| No. 1: | Pyro | 1 drachm |
| | Potassium metabisulphite | $\frac{1}{2}$ drachm |
| | Water to make..... | 5 ounces |
| No. 2: | Sodium carbonate (crystals)..... | $\frac{1}{2}$ ounce |
| | Sodium sulphite (crystals)..... | $\frac{1}{2}$ ounce |
| | Water to make..... | 10 ounces |

For a working solution, he takes one-half ounce of No. 1, two drachms of No. 2, and water to make two ounces, adding from one to four ounces of a ten per cent solution of potassium bromide. In this he allowed the negative to remain five minutes, then adding two drachms more of No. 2. If the highlights appeared in another five minutes, he considered that the exposure had been correct. He then dilutes the developer with an ounce of water and continues to dilute it as development proceeds. When the highlights are sufficiently dense,

which he finds takes from ten to fifteen minutes longer, he rinses the plate under a tap and soaks it for another ten or fifteen minutes in plain water to allow time for the developer still in the film to bring out the finer detail in the under-exposed parts. We found this last action to be a very essential part of the process. The temperature of the developer should be about fifty-five degrees Fahrenheit. Mr. Williamson varies the process a trifle on street traffic and theater scenes that permit of only a few seconds' exposure. With such he begins development without bromide, using one-half ounce of No. 1 in one and one-half ounces of water for half a minute or so, at sixty degrees. He then adds one and one-half drachms of No. 2 and continues doing so every two minutes until the image appears. He next dilutes the developer and raises the temperature at the same time by adding water at seventy or eighty degrees, continuing these additions of warm water as the density increases. If halation begins to appear, he introduces a drop of ten per cent bromide solution. We tried this last method once or twice, but were not as successful with it as with the former one. Mr. Williamson says nothing about his method of printing, and we still find some difficulty in that part of the operation. It is not an easy matter to find a view in which the lights are uniform and distributed over the whole field. The view will generally contain unusually bright lights or clusters of smaller ones in various positions, and where exposure is made for detail, these arcs or clusters are almost certain to be over-exposed. If we time our printing to show the correct gradation in the thinner portions of the negative, these more dense spots will not show enough detail in the print. This we overcome by first timing our printing correctly for the thinner portions, and then, by holding in front of the light a sheet of black paper with a hole cut in it just large enough to permit a small circle of light to fall upon the printing frame held about four inches therefrom, we slowly move the frame about with this spot of light playing upon one of these clusters or thicker portions of the negative. We can, working in this way, print each dense portion for a longer time without overprinting the thin and shadowy parts.

The novice will ask: Is all this trouble to accomplish a mere picture worth while? My answer is: No trouble that will help one accomplish the desired results can be too great for the earnest worker. Some old philosopher told us, a few centuries ago, that the more difficult becomes the attainment of any desire, the more highly it is valued when once achieved. The axiom proves as true when the principle is applied to photography, for photography is one of the modern fine arts, and art is at all times difficult to attain.

Work in every hour, paid or unpaid; see only that thou work, and thou canst not escape the reward. Whether thy work be fine or coarse, planting corn or writing epics, so only it be honest work done to thine own approbation, it shall earn a reward to the senses as well as to the thought; no matter how often defeated, you are born to victory. The reward of a thing well done is to have done it.—EMERSON.

Profit Out of Doors for the Amateur

By J. J. Beck



With Illustrations by the Author



THE AUTHOR READY FOR WORK

ANY amateurs no doubt find that the expense of picture-taking cuts rather deeply into their income, and possibly there are others who do not take as many pictures as they would like on account of the cost. They have off days or spare time in which they could use their camera as a means of making money if they only knew how to go about it. Now, after an experience of several years as a professional view photographer, I can look back and see where I missed many opportunities of making money with my camera when I was an amateur. In spite of the fact that in these days almost every family has a kodak or camera of some kind, one who can make better pictures than the usual black-and-white snap-shots taken in bright sunlight will find a good demand for his work; and any steady reader of

CAMERA CRAFT should be able to do this.

As to the outfit required, the amateur may use the one he now has, at least to begin with. I use a 5x7 view camera and would advise this as the best size for all-around work. If the camera owned is smaller, make post cards. These are always popular and will sell in half-dozen or dozen lots where only one large picture could be sold. If a folding camera of the post-card or larger size is to be used, uniform success in making negatives having sharpness and detail cannot be hoped for unless a plate adapter containing a ground glass for

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THE WATER IS ENJOYABLE

A GROUP ON THE SAND

focusing and a tripod are used. Conditions will frequently demand a large stop in order to secure short exposure, and this in turn will demand a selection of the most important feature for sharp focus. The salability of the pictures depends upon making negatives that are sharp throughout, negatives that give good detail in the shadows and that are clear and of proper contrast. This is what the great majority of people call a good picture. To get the sharpness and detail, accurate focusing and a medium-size stop are required, whenever possible, assuming that the lens is an ordinary rectilinear. This necessitates a time exposure, hence the tripod. The clearness and contrast are obtained in developing. I have found the developing tank and pyro unequaled where both detail and contrast are desired. The less expensive brands of developing papers give good results when one's negatives are of good quality and fairly strong.

Carrying a camera attached to a tripod puts one at once in a different class from the snap-shot amateur. It gives people greater confidence in your ability to produce good pictures and it is good advertising. It has much the same effect as would the carrying of a sign proclaiming that one is a photographer and ready in an instant to take a picture. Many a time, when walking along, carrying my camera on the tripod, I have received requests to make pictures from wholly unexpected sources. I spent one summer at a resort near a river, and it was only necessary to take my camera and walk along the wide, sandy bank in order to get all the business I cared for. People in bathing, out in boats, or those lying on the sand, would call to me to come and take their picture. Nearly every one of them had brought along a camera of some sort, but they reasoned, and reasoned correctly, that a man carrying a camera on a



A JOLLY LOT OF BATHERS

A GROUP OF SUMMER GIRLS

PROFIT OUT OF DOORS FOR THE AMATEUR



SOME COUNTRY SCHOOL PUPILS



A HIGH AND LOFTY PERCH

tripod would make better pictures than they could. I carried plate holders in a carrying case, and on the outside of this were a few samples of my work.

It matters not where the amateur is located, in town, city or country, there are opportunities to get pictures that will sell. A short list of some of the subjects I have recently taken, selling pictures in every instance, would contain the following: A country school, carpenters working on a new church, a group of children at play, a farmer and his family in their new automobile, floats in a parade, a juvenile baseball team, and a group of men at a boarding house. Were I to enumerate all the subjects I have taken in the last year, the list would fill pages. In no instance did I attempt to secure an order for a picture beforehand. Right here is the secret of making money out of doors with a camera. If a professional view photographer were to go about asking if pictures were wanted, making exposures only where he had secured a definite order, he would, most likely, hardly make expenses. It is a peculiarity of human nature that prompts a person to buy a photograph in which he appears, when he would have gone on for years without even thinking of asking a photographer to come and take one and would have turned away a dozen who came soliciting an order. This fact is the very foundation of the professional view business.

The proper way is to approach confidently the person in charge and ask permission to take a picture. The operator should strive to give the impression that he is not taking the picture with the sole object of selling prints, but rather, that he is taking it for himself or for some other purpose. He should not be discouraged if some one speaks up and says plainly that he does not want any pictures. The operator's reply should be that he simply wishes permission to



A PAUSE FOR THE CAMERA



A BUNCH OF FAITHFUL WORKERS



ALL SAME "MELICAN"

JUST SIX MONTHS OLD

TWO HEART-BREAKERS

take one. In almost every instance he will say that he has no objection. Then it is up to the operator to make good. Take charge and arrange the people in a pleasing group and otherwise place them in regard to the light so that they will show to the best advantage in the photograph. When making groups in bright sunlight, I find that the best results are secured by placing the subjects so that the sunlight strikes the faces from the front and side. Then a very short time exposure, say one-fifth of a second, with lens stopped to f-16, followed by pyro tank development, gives detail in the shadows with very little in the highlights. This is the kind of work which sells best; at least, it does so in the localities where I have worked. An important point to remember in making these out-of-door groups is to keep the faces rather small, especially those of grown people. Children and young people with round and unwrinkled faces may be made larger.

When one has the proof ready, he should first go to the person who he thinks will give him the best order, writing his name and the amount ordered on the back of the proof. This will act as a powerful suggestion to the others to give an order for a like amount. I use a high-grade, rather fancy slip-in mount for showing proofs. When one is shown, it can be slipped out and another slipped into its place. This gives a much better impression than showing an unmounted proof, and the customers have the choice of either the fancy or a less expensive, solid mount.

The bigness of the little things and the littleness of the big things—the ability to properly gauge their relative values—are determining factors in the life of every man. The man who ignores the small things in his haste to grasp the large, and the man who loses himself in the small things, indifferent to his larger possibilities, are on opposite sides of the see-saw. Both are due for the bumps.—"THE PRINTING ART."

Those Pictures for the Magazines

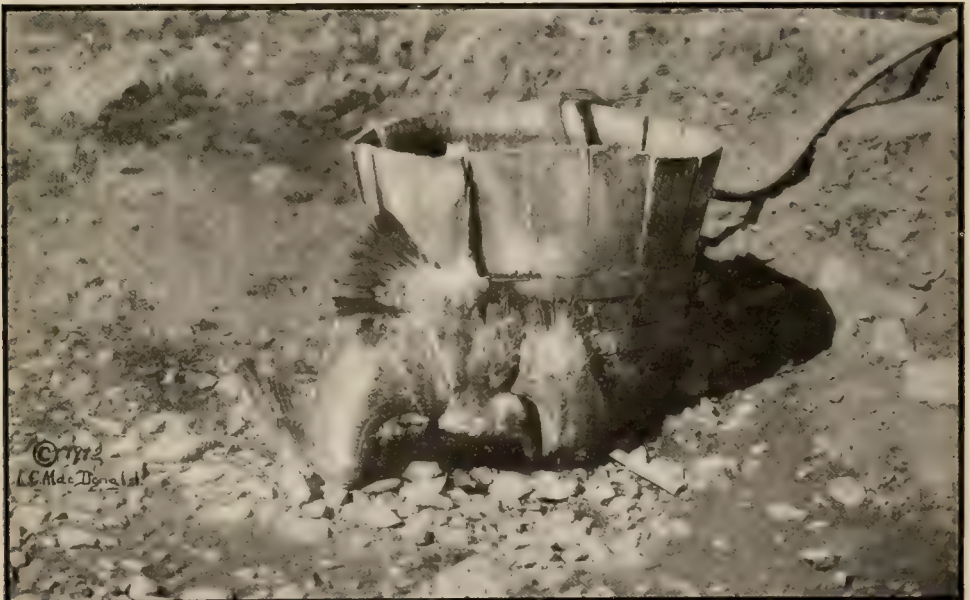
By L. C. MacDonald



With Illustrations by the Author

Some time ago I noticed an editorial in CAMERA CRAFT on "Those Pictures for the Magazines." Mr. Clute discussed the matter pro and con and ended with a request for the opinions of subscribers who had been successful or otherwise in selling pictures to the various magazines and illustrated monthlies. Since then I have been patiently waiting to see an article on the subject by one better gifted in handling a pen than I am, but as the article has failed to appear and as I believe there are many amateurs who would like to derive a few dollars from this source, but who hesitate for various reasons, I am attempting a short account of my experiences in selling pictures.

Now I believe the most common mistake that is made is in not studying the wants of the magazines more carefully before sending in pictures. One might as soon try to sell a blacksmith's hammer to a jeweler as to try to sell a picture of a threshing scene to a monthly dealing with architecture. The picture may be technically perfect and artistically beautiful, but unless it can be used to illustrate some article or theme of the magazine it is useless to the editor. Look at the picture from the viewpoint of a subscriber and ask your-



A SEA GULL CAUGHT IN A TUB.—Another Example of the Curious Kind.

CAMERA CRAFT

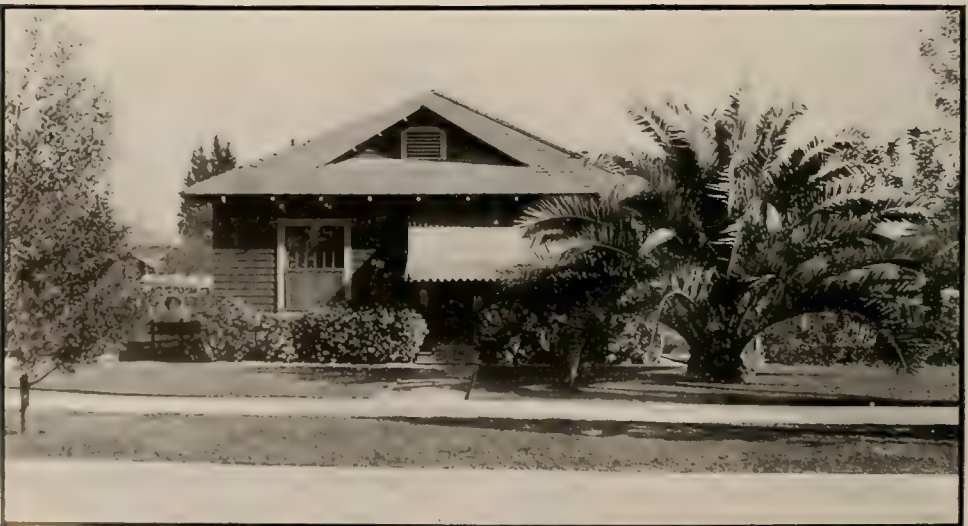
self the question: "If I were an interested subscriber to this particular magazine, would this picture be of interest to me?" Get sample copies of the magazines and notice the character of the illustrations. If your pictures do not meet with the requirements, save yourself disappointment and postage by not sending them. Right here I would give a word of advice. Rather than take pictures and try to fit them to the wants of the magazines, learn the wants of the magazines first and keep them in mind when taking pictures to sell to them.

Again, pictures that are acceptable at one season may not be available at a later one. Get your pictures in at the proper time. Holiday pictures for the holiday issues. Winter scenes and summer scenes, planting and harvesting scenes, all for their respective issues. Some of the editors are glad to write you their needs in their respective fields of work.

Personally, I had never dreamed of selling any of my pictures to a magazine, because I thought it was only professionals who were ever successful in that line. It was not until I saw an advertisement somewhere by Doubleday, Page & Company that I dared make the attempt. They stated their



THE BUNGALOW LOOKING RATHER "SEEDY."—An Example of "Before" Picture.



AN AGREEABLE CHANGE DUE TO PLANTING LAWN AND FLOWERS.—An "After" Picture to accompany the above.

THOSE PICTURES FOR THE MAGAZINES

need of "Before and After Pictures" showing gardens and houses remodeled, etc., and advised that the pictures need not be technically perfect as long as they were sharp and clear and of reasonable shadow details. It happened that seven years ago I had made a snap at our little bungalow when it was looking rather "seedy," and just a short time previous to seeing the "ad" I had taken another one showing the remarkable growth of a beautiful date palm and the agreeable change in the premises made by the planting out of flowers and lawn. I happened to have the old negative, and I made a print from each view on glossy paper, and with some doubts sent them in. Well, if they had sent me a check for a hundred dollars I would not have been more tickled than I was when I opened the return mail and read that the pictures had been accepted and a check for four dollars was forthcoming. Then I thought my success was made and my fame established and all I had to do was get pictures that seemed interesting to me and send them to the various magazines and receive checks in return. It was not until I had had several returned as unavailable that I awoke to the fact that the magazines did not want pictures merely because they were interesting to me. Then I began to study more carefully the character of the pictures and the subjects dealt with in the different monthlies, and since then I have had few batches of prints returned out of which at least one was not accepted.

Some of these magazines devote a page or more to pictures of odd and curious things. These magazines are always in the market for good freak pictures of almost anything. Look through *Technical World*, *Electrical World*, *Leslie's Weekly*, *Country Life in America*, etc., and then keep your eyes open and your camera ready for the opportunity when it comes. One who is observing may get many of these interesting pictures of subjects that are appearing and scenes that are occurring every day in the city and on the farm.

The farm and garden magazines also afford a market for good views of planting, harvesting and irrigating scenes. Pictures of bumper crops, flower gardens and landscape architecture make good material for these magazines. Before and after pictures of unsightly back yards which have been cleaned up and planted to gardens. Unattractive buildings



THE MONKEY PUZZLE TREE (*Araucaria imbricata*). The Tree That Neither Boy nor Monkey Can Climb.—An Example of the Curious Kind.

CAMERA CRAFT

made beautiful by planting vines and shrubbery and rearrangements of any kind in the garden or on the farm showing the improvements. These are suggestions.

Then there are the "News" pictures; that is, pictures of big fires and catastrophes of any kind. This sort of material is in constant demand by the papers and news magazines, but it must be the first to arrive in the office. This means hustle from the time of making the exposure until the print is mailed or handed to the editor, but these pictures command good prices and are worth the trouble.

Regarding prices. Prices paid for pictures depend on three conditions, namely: Size of print, purpose for which it is used, and quality of the work, the emphasis being laid on the first two. I do not mean to say that any old kind of a print will do, but that the technical work need not be perfect as long as the print is snappy and with enough detail to reproduce well. As a rule, nothing smaller than $3\frac{1}{4} \times 4\frac{1}{4}$ is acceptable and the prices vary with the different magazines. The average price paid for a 5×7 print is two dollars, other sizes in proportion. Prints used as cover designs and frontispieces command as high as fifteen and twenty dollars, but these must be exceptionally beautiful or must be particularly adapted to illustrate some theme which the editor has in mind.

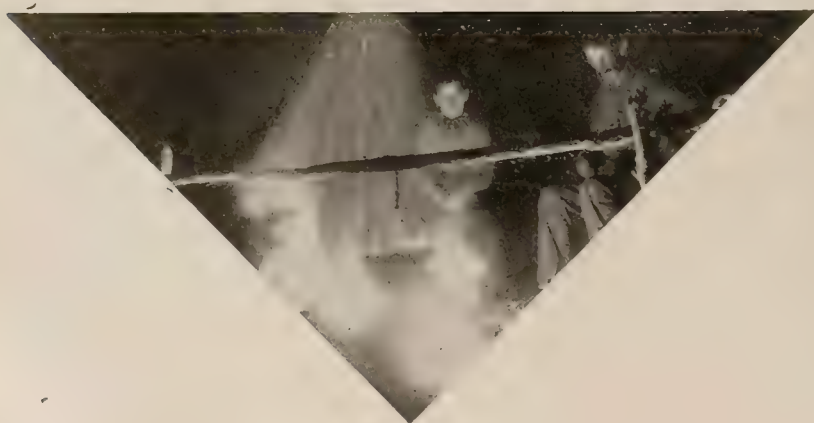
In closing, a few words about sending prints will not be amiss. When sending prints, always accompany them with a short description of the object or scene, giving the information in as concise a form as possible.

Write your name and address on the back of each print and on each sheet of description, numbering them to correspond. Send several prints in a batch, as you are more likely to have at least one accepted.

When writing the editors, make it brief. Do not give your family history or advise concerning your experience or inexperience as a photographer; they care nothing about such matters; they are after the goods.

If you want your prints returned in case they are unavailable, always put in return postage.

A word to the wise is sufficient.



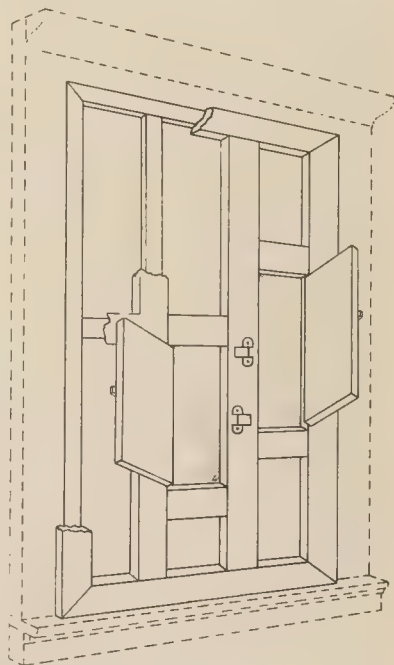
Window Shutter for Photographic Work

By Henry L. Feltes



Too many amateurs use a small, stuffy room or a closet for their photographic work simply because they fear the task of darkening the regulation window that lights the average room. The room I use is fourteen by twenty-six feet, with a window in one end and a door in the other. I first moved the roll curtain fixture up out of the way a few inches and then constructed the shutter which I will describe; this particular one being used when I am working developing paper, bromide paper, plates or films.

I took some pine strips, $1 \times 1\frac{1}{2}$, and made a frame that just fitted the inside of the window casing, putting in cross bars of the same material, as shown in the sketch, where the wider frame is cut away. Next, taking some half-inch lumber of the same material, four inches wide, I covered the first framework, making it double, with the top frame, the one made of half-inch stuff, extending an inch and a quarter over and beyond the under or inch and a half one, except at the bottom, where both the frames meet the window sill instead of the top one passing over and beyond as it does at the top and sides of the casing, when in place. In the sketch are shown both the first or under frame that fits into the window casing and the upper or wider one that is nailed to it and that extends outside the casing, thus making the shutter light-tight. A strip of woollen cloth, doubled, is tacked along the bottom to make that part light-tight and to prevent the scratching of the sill in putting the shutter in place and taking it down.



The right-hand door is fitted as shown, using solid inch stuff, two small hinges and a cupboard catch and latch. The other door is the same except that it swings in the opposite direction so as to be out of the way of the first. Some yellow photographic fabric can be cut into strips and tacked around the edges of these doors to shut out the light that might come in along the sides or at the hinges. This framework I gave two coats of black paint and when dry covered it all except the door opening with photographic fabric of a yellow color, tacking it on. This fabric, obtainable at my dealer's, cost forty cents a yard. Both doors are about ten by twelve. Over the opening of the first I placed a

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sheet of ground-glass, putting it in from the back, while the second opening is covered with two thicknesses of orange fabric. Below this last or left-hand door is an opening, about eight by ten, that has one orange and two ruby glasses over it. This is safe for plates, even with bright daylight outside. There is a thin shutter arranged so that it can be slid across in front of this window and thereby permit of the light being cut down or regulated. There is also a shade or reflector like the one on a dark-room lantern, hinged at the top in the same way, that can be raised or lowered to protect the eyes and throw the light downward. Neither of these is shown in the sketch. This completed my window shutter with the exception of placing an ordinary screen-door hook about the middle of each side frame piece, with a corresponding screw-eye in the window casing at each side, so that the shutter could be hooked into place so there would be no danger of its falling back into the room. My own shutter is such a snug fit that the hooks are never required, but they are much safer.

When starting to work developing paper, I run the roller blind up out of the way, insert my shutter and catch the hooks, then open both the little doors, the one at the right giving me plenty of light to put the room in shape for work. My work table is put against the window where the light is admitted by the left-hand door makes developing safe and convenient. I use four trays: a small one containing developer, a larger one holding the short-stop, the third the fixing bath, and a still larger tray full of clear water for washing prints. My paper is kept in a light-tight box, the lid of which is closed after each sheet is taken out and put in the frame. Exposure is made by holding the frame up at the desired distance and opening the little upper door for the necessary time. If the negative needs dodging, I simply work further away from the light so as to gain time to regulate the printing. My exposures range from one second to fifteen or longer. A beginner with such a light will have to use test strips first, but he will soon be able to judge quite accurately as to the time of exposure and can go ahead and have but an occasional print to make over.



An Excellent Lens Shade

By A. W. Ollar

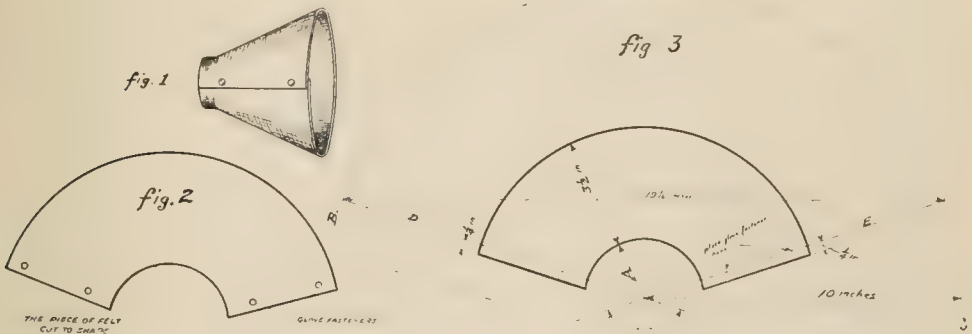


An excellent lens shade, one that is right in color and texture, light in weight and easily carried about, can be easily made from a piece cut from a discarded black stiff hat.

Fig. 1 shows the finished cone-shaped lens shade, the ends of the felt buttoned together at edge with two glove fasteners, as it would appear when placed in position on the lens. Fig. 2 shows the shade lying flat as cut to form from the piece of felt. Fig. 3 is a diagram to facilitate cutting the felt of the proper size and shape to fit any particular lens barrel. To lay out a pattern for a shade, take a piece of paper and with a compass set at ten.

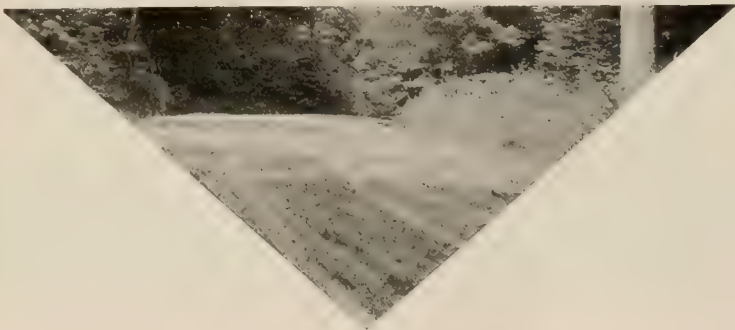
AN EXCELLENT LENS SHADE

inches, draw the curve shown by the dotted line B C. Then, from the center point draw the two dotted lines D E at an angle of one hundred and forty-four degrees. If no protractor is at hand for obtaining the angle, see that the points where they strike the large circle are nineteen and one-sixteenth inches apart, as given in the drawing, which will insure the angle being correct. Next draw the two inner curves to form the pattern as shown by the heavy lines on the diagram. The felt is allowed to extend one-fourth of an inch beyond lines



D and E to give one-half inch overlap to the edges when buttoned, and the buttons or glove fasteners must be placed with their centers on the lines D E as shown.

The distance A, from which the smaller curve is struck, depends on the size of the lens barrel and can easily be determined by remembering that if it is one-quarter greater than the diameter of lens barrel, that end of the shade will be exactly the size to fit lens when buttoned around it, but it would not be a tight enough fit to be rigid when in position. Therefore, the distance A should be the same as the lens barrel diameter, which will result in the cone opening being one-fifth smaller than the lens barrel. This small end may then be flared out slightly with the point of a hot iron until it fits snugly enough to the lens to remain in position when in use. As warmed by the point of the iron, the felt is easily shaped, becoming stiff and rigid when cold. The felt can also be nicely flattened with a hot iron before cutting out from the paper pattern. Of course a cone with greater or lesser angle may be made by modifying the figures given in the diagram.



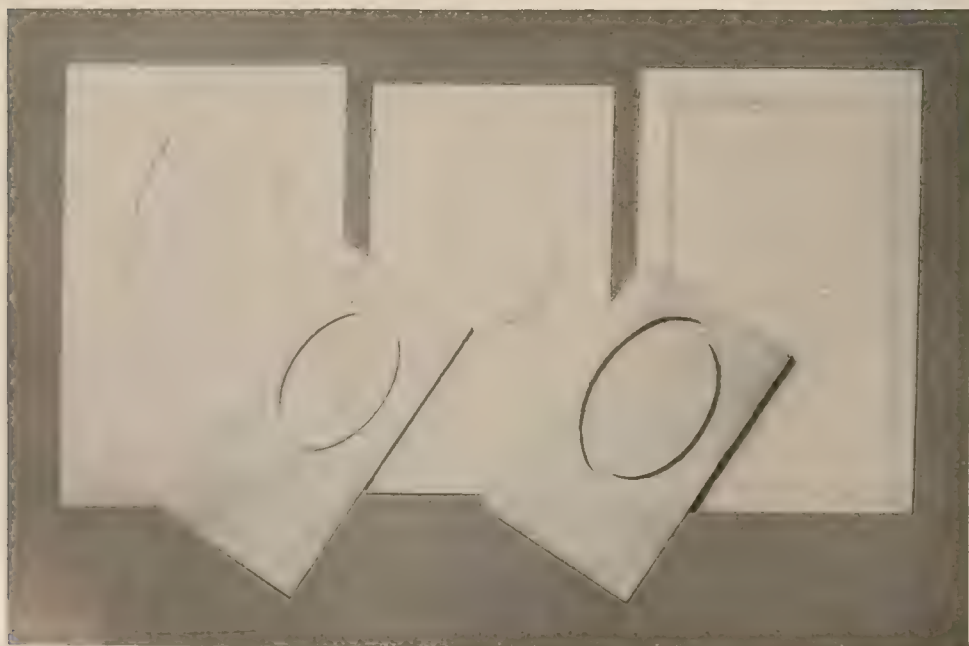
To Emboss Post Cards or Mounts

By George E. Whiting



An embossed or raised border around a small print adds greatly to its finished appearance, be the print trimmed and pasted within the embossed border or simply printed in the center of a sheet of paper or card and the paper or card itself given the raised border effect. The treatment is particularly suited to small prints printed within a suitable mask in the center of a post card or other double-weight stock.

To supply oneself with the required tools for doing this work requires only a little skill and patience and a very small expenditure of cash. As an example, let us prepare to emboss an oval on an ordinary post card. Take some good, hard cardboard, about three-ply, and cut two pieces $3\frac{1}{2} \times 5\frac{1}{2}$ inches. Then take an oval cut-out form, place it in the exact position desired, cut out the oval, and save both pieces. Take the larger or outside piece and with a pencil mark a line around the hole as evenly as you can, about one-eighth of an inch therefrom. By setting a pair of cheap dividers at the desired distance and running it around, the line can be made a perfectly uniform distance from the opening throughout. Next, with a good sharp penknife cut around, following this line as closely as possible, cutting clear through the card. Now paste the outer cardboard form on the other card of the same size, paste the



FOUR EXAMPLES OF EMBOSSING AND ONE OF THE DIES

TO EMBOSS POST CARDS AND MOUNTS

oval piece evenly in the center, and place under a weight to dry flat. This is the die.

The embossing tool is made by taking a cheap wooden file handle, inserting a generous supply of good glue in the hole intended to receive the file, and in this glue imbedding a five-sixteenths inch new ball-bearing, first rubbing it free from all grease. About half of it will be imbedded in the glue, and it will stick quite firmly if allowed to first dry for three or four days. To make the embossed oval, lay the post card on the die and, holding it so that it cannot slip, run the embossing tool around over the shallow channel in the die beneath. The same die can be used to emboss an oval in a piece of cover stock and a print trimmed with the oval cut-out form will just fit within the raised border so produced.

To emboss a line around the edge of a post card, make a die only in the form of one straight channel along the edge of a piece of the three-ply card. Cut one strip about six inches long and three inches wide, another the same length and the width you want embossed line within the edge of the post card, a quarter of an inch being about right. Paste the second strip on the first, keeping an edge of each flush and square. Then cut a strip the width the embossing is wanted, say an eighth of an inch as is the case of the oval, and place this against the side of the narrow strip, without pasting. Against this last paste a fourth strip, two and five-eighths inches wide in this case, remove the unpasted strip and the die is complete after being allowed to dry under a weight as before.

This is used successively under the four sides of the card to be embossed. In fact, one can make dies for any shape or size of embossed border he may require by following out the practice that the making of the two above styles involves. The last one described does not give a true border, as the embossed lines cross each other at the corners; but a die made as for the oval, but with straight sides, will give the best results in the case of a large mount or small print with a wide margin.

I have used my set of dies for over two years without as yet any signs of wear, despite the fact that some of them have had considerable use on quite heavy stock. If one will but exercise a little care and ingenuity, he can make a variety of different sizes and shapes, the use of which will add much to the finish of his photographic work.

Man owes his growth, his energy, chiefly to that striving of the will that conflicts with difficulty, which we call effort. Easy, pleasant work does not make robust minds, does not give men a consciousness of their powers, does not train them to endurance, to perseverance, to steady force of will, that force without which all other acquisitions avail nothing.—WILLIAM ELLERY CHANNING.

PARAGRAPHS PHOTOGRAPHIC

Kindly Contributed by Our Readers

Our readers must remember that this department depends upon their own efforts. If all hold back and wait for others to furnish the little hints that make it so valuable and interesting, there will be no continuation, there being no material. Send in your contribution; the editor will see that it reads all right; and, as he gets around to it, he will send you a print or something in return for your kindness. Perhaps that last will induce you to do your share.—

THE EDITOR.

BROMIDE PAPER FOR CONTACT PRINTING: The many inquiries I receive from fellow members of the I. P. A. regarding the contact prints on bromide paper that I send them, make me feel confident that there are many workers who do not realize its value for this purpose. Whether they are under the impression that its speed does not permit its use in contact printing, or whether they have never given this grand printing medium a second thought in this connection, I know not; but the fact seems to be that many deem it impossible, or at least very difficult, to use bromide paper in this way, neither being, in reality, the case. This prompts me to give, in a short way, my working method, although much more could be said on the subject. Possibly one of our better workers could take it upon himself to give us a more detailed account in some future number.

Bromide paper lends itself very admirably to contact printing for the reason that many subjects are rendered thereon far more pleasingly than on even the softer grades of gaslight paper. Of course, in using it, its speed must never be forgotten, and therefore a weaker printing light must be employed. This can be easily accomplished in various ways, namely, by diffusion, increased distance from light to printing frame, or both, or by selecting a weaker light source. Personally, I prefer the last, and find an ordinary straight-wick oil lamp to answer the purpose. Using this light, I place my printing frame about six feet from the lamp. I find that better results are obtained by printing at a distance than when placing the frame too near the light. Several seconds, from two to four, are usually sufficient. Of course, the duration of exposure depends greatly upon the light used, the density of the negative and the distance between frame and light; therefore, no set rule can be given. A trial or two will soon put one on the right path.

Development, as well as the filling of the printing frame, must be carried on in red or yellow light, preferably the latter. I first experienced a slight difficulty here, namely, in judging the density of the print in yellow light, the image appearing much darker than it really is. Therefore, a caution not to remove remove the print from the developer too early. Give the full time called for in the formula sheet, and, if too dark when finished, give less expos-

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ure, and vice versa. The makers' formulæ give good results; they are given for a reason, and should be used, especially by the beginner. If, however, one desires to make experiments, he will find the following to be an excellent developer:

A: Water, cold 24 ounces

Metol 120 grains

Dissolve well and add:

Sodium sulphite $2\frac{1}{2}$ ounces

Potassium bromide 15 grains

B: Water 8 ounces

Potassium carbonate 350 grains

For use, mix three parts of A and one part of B. Development will require about two minutes. After development, the print should be well rinsed in a one-in-ten solution of common salt, again well rinsed in clear water, and then fixed as usual.—Paulus W. Weber, Wisconsin.

TWO ON A PLATE: There is, I believe, a slide manufactured to take the place of the regular one in the plate holder, so made that one can take a picture first on one end or one-half of the plate and then one on the other end or half thereof. In my photographic work I prefer simplicity and am compelled to use economy, and therefore I make my own apparatus wherever and whenever I can do so.

I can generally find a piece of paper in my pocket, dark by preference, but failing in that, can use a piece from my lunch basket or find some old piece floating around somewhere, even if it may not be too clean. This I cut or tear to about the width of the plate holder and by folding it around the end of the holder, the end I poke in first, so that the half coming inside will cover up half of the plate, prevent that end from being exposed when the slide is withdrawn and the shutter snapped. I push the holder, paper and all, into place, draw out the slide and am ready to take the first picture. This done, I replace the slide and take out the paper. On putting the holder back in the camera, I draw the slide only half way out and take the picture on the other end, the end previously covered by the paper.—William M. Blacar, Maine.

READ THE ADVERTISEMENTS: The readers of *CAMERA CRAFT* should give close attention to the advertisements of the manufacturers, for they will find them to contain a good deal of information that will be of value; for instance, the advertisement of a well-known manufacturer of plates contains the following: "From the highest light to the deepest shadow is necessary, if negatives yielding the best possible prints are made. This separation of tones should not be abrupt, or the resulting negative will be hard, but the separation should be definite or the tones in the lights will run together and the half tones and shadows lack crispness." Then follows a boost for his goods, of course; but whether you use this particular brand or not, the principle set forth is true, which is my point. Get all you can from the advertisements. They are there for that purpose.—E. R. Lowe, Nebraska.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

Vol. XX

San Francisco, California, December, 1913

No. 12

A Merry Christmas and A Happy New Year

Why We Are Late

Our good friends, readers, dealers and advertisers, are displaying no little impatience at the lateness with which our magazine is being published at the present time. Our explanation, offered in the October issue, seems to have been overlooked by a great many. To again explain, we can hardly do better than quote notice given a full page and inserted in a recent issue of *The Pacific Printer*, another San Francisco magazine requiring the same high quality of printing as our own. It advised:

"This issue has been produced under unavoidable adverse conditions existing in San Francisco. We ask the indulgence of our readers and others interested, for the delay and disappointment involved."

This condition in the printing trade still exists; but, while our printers are doing quite well in maintaining the standard of the work delivered to us, they seem to be making up for lost time somewhat less rapidly than we might desire.

Pictorial Photography At Our Coming Exposition

The policy of the Exposition management to exclude all photographic work from the Fine Arts Building is hardly assailable when it is understood that only *autographic work of the brush and pen*, together with *sculptures*, is included in the classification for the Department of Fine Arts. Believing that much if not all of the criticism that has been or might be offered will be withheld if this matter is fully understood, we are glad of the opportunity to publish an expression of the views of the Exposition management as outlined below. The original letter from which we quote was dictated without any intention of its meeting the eye of the public, but it seemed so clearly to set forth the views of the Exposition management that we sought and were freely granted permission to place these excerpts before our readers:

"It will be impossible to include in the Department of Fine Arts of the Panama-Pacific International Exposition at San Francisco in 1915, work of every character which was included in the Department of Art at the St. Louis World's Exposition of 1904.

"The classification for San Francisco has definitely been adopted after careful consideration and consultation with some of the world's best exposition authorities. From it will be seen that many articles shown in the Department of Art at St. Louis are, at San Francisco, classified in the Department of Liberal Arts and in the Department of Manufactures.

"Take, for instance, the classification of the Photographs; in St. Louis, pictorial photography was considered to be properly in the Department of Art, and various other forms of photography were distributed throughout the Exposition. In San Francisco, all photography as an exhibit will be in the Department of Liberal Arts, and it will, therefore, be possible for an exact comparison to be made between photography used purely as a

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mechanical process, and photography in which there is evidence of emotional and intellectual activity on the part of the photographer. This will do far more for the interests of pictorial photography than would the sorting out of all good pictorial photographs from the general photographic exhibition in order to show them in the Fine Arts Building.

"There are also other reasons for the limited classification in the Fine Arts Department; one of them, at least, seems of great importance, and it is the consideration of space. The size of the Fine Arts Building is definitely fixed, and is none too great for its uses, without the inclusion in that building of the applied arts.

"It seems to be unimportant whether any given article is exposed in building A or building B, *provided it is well and properly exposed.*

"Mr. Hardee, the Chief of the Department of Liberal Arts, and Mr. Green, the Chief of the Department of Manufactures, quite well understand the problem with which they are confronted, and all who are specially interested in the Applied Arts will undoubtedly be well satisfied with the installation which their works will receive.

"This is written merely that some of the considerations may be understood that lead to the adoption of so limited a classification for the Department of Fine Arts at San Francisco, which really includes nothing but autographic pictures and sculpture."

When Is An Honorary Member?

The Photographers' Association of America has only five "honorary" members, and one of the individuals so honored has written the less-favored individual members to apprise them of the fact and acquaint them with the names of four quite estimable gentlemen who enjoy that honor. The fifth man is "I," the writer of the letter, Elbert Hubbard himself. This he quite modestly announces by devoting the entire opening paragraph to the fourteen words required. He speaks of "our art," and of his efforts to "boost the game," with a like display of maidenly charm. This should prove to the members, the recipients of the letters, that at least one "honorary" member of their association is entitled to more consideration at their hands than an empty title usually bestows. Just imagine Sir W. de W. Abney, Doctor Duhrkoop, Governor Eberhart, or Professor Griffiths devoting his energies to "boosting the game." These gentlemen would hardly know how to go about an undertaking of such an illuminating nature.

And all that this one exceptional honorary member asks in return is that the members, individually, "come across" for one or both of the two magazines that he publishes, using the subscription blank enclosed, and thereby avoid missing a few "good things." And in "coming across," use the self-addressed envelope, also enclosed, marked "Personal" in bold script. We had supposed that this cheap device of a self-addressed envelope marked "Personal" had been abandoned years ago in recognition of the increased enlightenment of even the most interior rural population, but our "one of the five" evidently wishes to avoid even an implied rural classification of his less-favored fellow members.

The Photographers' Association should learn a lesson from the ingenious plea of this shining light of East Aurora. It should select for a like honor a few more individuals who are capable and willing to "boost the game" for the small privilege of soliciting orders from its members. Bing's Balsam is an excellent remedy for rheumatism and Scrogg's scouring soap certainly removes the dirt. Both Mr. Bing and Mr. Scrogg would no doubt show great capability in "boosting the game." With a few more "honorary" members of this type the business of portrait photography would at once enjoy an era of gratifying

prosperity. Should, at any time, the effect of the "boosting" seem to diminish, it would only be necessary to add to the list of honorary members a few judiciously selected names. Why cumber that list with honorary members who have neither the enterprise to "boost the game" or to manufacture and solicit orders for rheumatism cures, scouring soap and other "good things" capable of inducing members to "come across"?

The Hammer Representative

Another trip over the circuit and the genial and kindly A. K. Rose is again paying us his regular visit that is so much appreciated. Mr. Rose not only covers quite an extensive territory out here on the Coast and Slope, but he finds it possible to not only be present at all of the conventions therein, but to take quite an active part in making them a success. In fact, he has been christened "The Dean of Demonstrators" by old members of the Inter-Mountain Association, who are appreciative of his uninterrupted convention attendance and help since the Association was first formed. Loyal to his firm and its product, helpful and inspiring to the photographers in his territory, his recurring visits can result only in profit and satisfaction to all.

Mr. Beattie On The Coast

J. W. Beattie, well known to convention attendants and others throughout the country as the able exponent of Cramer plates, is spending a few weeks on the Coast in the interest of his firm. He has made a host of friends by his genial and pleasing manner, and his visits are appreciated still further because of the wide knowledge and experience that make his convention work so gratifying to those in attendance.

The Need of Co-Operation

In the coming together of men, in the magnetic affinities that spring up between them, are the forces that engender Art creativeness, just as in academical life they give rise best to speculation and literary creativeness. Ideas may be conceived in solitude, but they are brought to birth by co-operation. Men take creative force from each other. Those physical moments of which we now hear so frequently, imply men in the number, in the combined readiness to accept the new idea. The ancients would have stated the case between the workshop and the studio in the terms of Pantheism. Narcissus had a studio by the brookside, and he perished in the contemplation of his own loveliness. Vulcan had a workshop under Aetna, and all men and gods marveled at it, for it was grand and awful by virtue of the united and rhythmical ringing of its hammers.—C. R. ASHBEE.

Men do not attain perfection by striving to do something out of the common. Perfection is acquired by doing common things uncommonly well.—
"THE PRINTING ART."

THE AMATEUR AND HIS TROUBLES

Conducted by Fayette J. Clute

Making a Bellows

A subscriber in Oregon desired to build an enlarging apparatus, but is in some doubt as to just how to go about the construction of the bellows he requires. He has seen, somewhere, a very complicated diagram showing all the "dips and angles" necessary for marking out a bellows and is somewhat afraid of the apparent difficulty. The truth of the matter is that the making of a bellows is quite a simple matter, and for his enlarging apparatus, to be used indoors, a good, close-woven and heavy black cloth will answer as well as leather for the covering, and cost very much less. Possibly something just suited to the purpose might be secured from a dealer in bookbinders' material. The first thing to do is to construct a cone-shaped box or form with the large end the size of the large end of bellows and the small end the size of the small end thereof. This form should of course be as long or a trifle longer than the bellows when extended. Cover this with a thickness of thin but stout black cloth, which will form the lining of the bellows when done, and it is well to have the seam or lap come on what will be the under side. Then cut a supply of cardboard strips, one-half of them about an eighth of an inch narrower than the others, the wider ones being about three-quarters of an inch wide, the width depending upon the size of the bellows. If quite large, the wider strips can be cut an inch wide, and if for a small bellows, half an inch may be enough. Take two of the wider strips, cut them a quarter of an inch shorter than the long side of the box is wide, cut their ends at an angle of forty-five degrees, and paste or glue down on the black cloth, wide edge along the edge of the form. Cut two pieces for the side, also a quarter of an inch shorter than the side, but have the angle at the end only enough to conform to the angle of the box, not forty-five degrees as in the case of the long strips at top and bottom. The next series of strips are to be cut

from the narrower strips of cardboard. Those on the top and bottom of the bellows to have their ends cut at an angle that causes it to meet the forty-five-degree angle of the strips already in place. These strips are glued down an eighth of an inch from the first, the short side coming toward the short side of the first strips. The narrow strips at the side are, as with the first, cut so that the angle conforms to that of the box or form. Continue in this way until the form is covered. Then cover all with a piece of thick cloth or leather, allow to set, remove the form and make the folds by bending each one into position with the hands, beginning at the large end. The work is hard to describe, but a little experience will make it quite easy.

Efficiency of the Focal Plane Shutter

A correspondent in Ohio asks what we know about the disputed efficiency of the focal-plane shutter that had some attention a couple of years ago. Adolphe Abrahams, an English writer on such subjects, contended with considerable show of justification that the capabilities of this form of shutter were being greatly over-rated. He pointed out that the conditions necessary to attain a speed of one-thousandth of a second with this form of shutter, even with an extremely narrow slit, were hardly possible of attainment. The speed claimed is a theoretical one depending upon the slit being in actual contact with the plate and the light originating from a point. He claimed that with a one-eighth inch slit at a distance of five-eighths of an inch from the plate, using a lens at f-8, the efficiency was only half the theoretical one. Increasing the slit to get more illumination makes matters worse, and, of course, stopping down the lens to better the per cent of efficiency only makes conditions less suited to high-speed work. One would really have to look up files of the English journals for 1910 to follow the dis-

cussion thoroughly, and I am afraid it would take quite an amount of calculation to verify the claims for and against the roller blind focal-plane type of shutters. For most workers the best plan is to simply try out one of the shutters and find out if it answers the purpose for which it is intended to be used.

A Tray For Hot Toning

The other day I visited an amateur and found him using the hot alum-hypo bath to tone some bromide prints. The arrangement of the tray in which the solution was kept hot was such that it is worth describing for the benefit of my readers. The tray proper was made by taking a piece of galvanized iron of the desired size, in this case about 18x24, and giving it a rim of half-inch wood about four inches wide. The iron was tacked to the under side of this frame or edge with tacks spaced about an inch apart. This tray was then lined with oilcloth that was neatly folded in at the corners and edge nailed over the edge of the wooden rim. To use, a large bread-pan was filled about half full of water and placed over the gas stove in his work-room, and the trap placed thereon. The steam from the boiling water in the pan raised the solution in the tray to the proper temperature and there was no danger of its becoming hot in places as is the case when an enameled tray containing the toning bath is placed directly over the flame of a stove or heater. The oilcloth will not burn, and this fact permits one to use what is really quite an inexpensive tray, particularly in the large sizes.

Gum-Bichromate Prints

An Illinois correspondent asks about the paper suitable for gum-bichromate work. Unlike the paper required for the various other kinds of printing emulsion, paper for gum-bichromate printing requires no attention as to the matter of purity. The main requirement is that the paper be strong enough to stand the soaking that the developing and clearing demand. The roughest of drawing paper may be used for large prints of broad masses or where a sketchy effect is desired. If detail and gradation of the tone are wanted, a fine linen paper can be used. If the paper is too soft and absorbent to hold the coating of gum and pigment well on the surface, a coating of size, one hundred ounces of arrow-root to ten ounces

of water, can be applied. Some fine effects can be secured by using paper of various tints, tints harmonizing with the sentiment of the picture to be printed thereon.

Bleaching Prints to Leave Drawings

A Nebraska correspondent wishes to know how to bleach out the image on some bromide prints over which he will make drawings in Higgins' waterproof India ink. Any silver prints on printing-out, developing or bromide paper can be bleached out in either of the two following formulas:

Iodine	6 grains
Iodine of potassium.....	60 grains
Cyanide of potassium.....	60 grains
Water	10 ounces

The second formula:

Thiocarbamide	120 grains
Nitric acid	120 minims
Water	10 ounces

The first, on account of the cyanide, is quite poisonous and should be handled with some little care as to cuts and abrasions on the hands. Either of the formulas will remove the image practically completely with the exception of some few cases in which a developer that gives a stain of its own has been used on a gaslight paper subjected to a hardening bath after developing.

Using Wash Blue

Perhaps it is a trade secret, but the user said I was perfectly welcome to print it if I wished. I was in his dark-room and saw a bottle of the ordinary wash blue sitting on a shelf conveniently placed above his washing sink. An inquiry brought forth the information that he always added just a trifle to the last wash water for his black and white prints and enlargements. He said it brightened them up most satisfactorily, only one should be careful and not try to use too much. It looks logical and is certainly well worth a trial.

Coloring Electric Light Bulbs

Electric light bulbs of the ordinary kind such as our Washington subscriber mentions, can be made yellow and safe for use in his bromide room by dipping them in a strong gelatine solution that has been dyed with tartrazin. After this is thoroughly dry, it will be well to give them a coating of celluloid varnish as a protection against wear and moisture.

A PHOTOGRAPHIC DIGEST

Edited by H. D'Arcy Power, M. D., Burlingame, California

Lenses Not of Glass

Photography says that "The granting of patents to the Zeiss firm for lenses containing fluids serves as a reminder that, although one usually thinks of glass as the material of lenses, there have been many suggestions for the use of other materials, some of which have been realized. Rock crystal for spectacles is the best known example, but not the only one. For certain scientific work with the camera, glass cannot be used on account of the way it absorbs the ultra-violet radiations, and combinations have been made with lenses of quartz and Iceland spar to get over this difficulty. It was pointed out in these columns recently, when dealing with photography with the ultra-violet, that the lens had to be composed of quartz for this reason. Diamond, topaz, and fluor spar are amongst the other solids which have been employed, while the fluids suggested have been very numerous. Sutton's panoramic water lens, a spherical shell of glass filled with water, and used with a curved plate, was put on the market in 1860. Twenty years earlier Archer used a doublet lens, each combination consisting of two thin glasses enclosing water. The Grün lens was another employing a fluid, and in one sense the drop of oil used with immersion objectives by microscopists may be regarded as a fluid lens. In sizes larger than a mere drop, however, there are considerable difficulties in the use of liquids."

In connection with the above remarks, I may state that if, as is averred, quartz passes ultra-violet rays and ordinary lens glass does not, then the chemical action of the rays is less than we should naturally expect. I recently had ground (for purposes to be described later) a periscopic spectacle glass of five inches focus, and critically compared it with a precisely similar lens of glass. The negative from the quartz lens showed a definitely larger amount of silver deposit, but not of such density as to offer a decided

advantage in its use. Curiously, the definition of the quartz spectacle lens was much better than that of the glass one, although I am told that these lenses have passed out of use in spectacle-making because of the frequent presence of optical flaws.—H. D'A. P.

Practical Notes on the Hyper-Sensitizing of Autochromes

M. Monpillard, writing in *Photography and Focus*, says: "Autochrome pictures which have been made on plates which have been 'hypersensitized' by means of the special sensitizing liquid which is supplied for that purpose, and exposed through the color screen 'Auto. J. H.' made for use with them, may be found at times to manifest two quite different effects. In one case they have a prevailing roseate tint, while in the other they are characterized by a yellowish green, the two shades being complementary to each other.

"The former result is brought about either by the autochrome plate being immersed for too long a time in the hypersensitizing solution, or, when this has not happened, the time of immersion being normal, it may be due to great over-exposure. On the other hand, the yellowish-green tint, to which F. J. Hargreaves referred in a recent issue, is caused by too short a time in the hypersensitizing bath or by great under-exposure. If the instructions which are issued with the solution are followed strictly, and the exposure given is a normal one, no dominating color should be seen when making use of the 'Auto J. H.' special screen.

"The characteristic actions of pinaverdol, of pinachrome, and of pinacyanol slightly vary with different samples of those dyes. In consequence of this, every time that a new batch of the hypersensitizer is made up, a number of tests made with the particular screen named and autochrome plates are invariable preliminary; so that the exact proportions of each of the three ingredients may

be determined. The tests which are always made by the writer himself, sometimes under M. Simmen's supervision, are of a practical nature, being made with a colored screen which includes a neutral gray tint, which would reveal on the hypersensitized plate the least trace of any dominant color, and also on an outdoor subject with plate or zinc-covered roofs, which are equally effective in enabling the exactness of the color rendering to be examined.

"Beside the defects referred to above, those who use the hypersensitizing process occasionally meet with pictures which are wanting in brilliancy, all the tints being degraded somewhat by a light veil of a grayish tone. This is due to the fact that if as brilliant results are to be obtained on hypersensitized plates as on ordinary autochromes, a developer which is decidedly more energetic must be used. Consequently, if the metoquinone solution sold ready-made by Messrs. Lumière, the formula of which has been published by them, is used, it is preferable in the case of hypersensitized plates to employ it at a strength of two parts of the stock solution to three parts of water, and it is often advantageous to prolong the time of development to three or four minutes, according to the indications given by the appearance of the image on the plate. When as concentrated a solution as this is used, two or three plates may be developed in succession in the same solution.

"Working on these lines counteracts to a great extent the results of slight under-exposure, a fault always likely to be met with in instantaneous color photography, and prevents the yellowish-green tint, a very little of which goes far to rob the picture of its charm."

Steadying the Tripod

Several suggestions for steadying the tripod in a high wind have appeared in our pages lately from various correspondents, but it is noticeable that in all cases the sole idea seems to be the suspension of a heavy weight from the tripod head. This expedient diminishes the chance of the apparatus being blown over, simply because it lowers the center of gravity of the whole structure of tripod and camera, but it does nothing to diminish vibration, and, in fact, in many cases increases the liability to vibrate. This should be apparent if we remember that no tripod

is steady if the camera is too heavy for it, and hanging a heavy weight on the camera screw is equivalent to increasing the weight of the camera. If the legs are not stiff enough or rigid enough to carry the extra weight without yielding, the tendency to vibration is increased, and the trouble is likely to be intensified by the swinging of the heavy pendulum hung on the tripod screw. To cope with the difficulties due to strong wind there are two things to be done. The apparatus must be held down to prevent its falling over and the legs must be braced or stiffened to prevent vibration. One simple method of doing this is to attach a string to the center of each of the legs, then bring all the strings together to a point under the center of the tripod head and about half-way up from the ground. From this point take another cord down to the ground, securing it firmly by the simple expedient of standing upon it. A loop in the end of the cord is convenient for the purpose of putting the foot through. The center cord then holds all down to the ground, while the three legs being pulled in slightly towards the center are no longer free to vibrate, hence the whole apparatus is rendered as rigid as possible.

There are two things about the tripod and its use that we have often noticed—first, that few photographers appear to know the proper way to level a tripod, most of them handling it as if they were dealing with a four-legged stand such as is used for theodolites, etc.; and, second, that many, if not most, of the commercial tripods are so constructed that the legs fall off if gripped too vigorously. This has happened many times in our own experience, and several times with bad consequences for the camera. The secret of rapid leveling with a stand of either three or four legs is always to leave two legs resting on the ground. Thus with a tripod one leg only should be lifted and adjusted, and two legs should only be moved when the stand is provided with four. It is very usual to see the photographer standing between two of the legs of his tripod and lifting one in each hand in the attempt to get the camera level. This is the slowest and most uncertain method of proceeding, but if one leg is manipulated alone a true level can be attained in a few seconds. The falling of the legs when gripped near the head can be perfectly guarded against if the pins on

A PHOTOGRAPHIC DIGEST

the tripod head are reversed so that the upper sections of the legs have to be brought nearer each other to grip the pins. A strong hook will then hold the sections together, so that an accident is quite impossible. The ordinary method, of course, is to set the pins pointing inwards, a strut forcing the leg sections apart on to the pins. If the leg is then gripped above the strut the sections head towards each other and come off the pins. It should also be added that the right method of attachment gives a rather greater spread to the upper parts of the legs and adds considerably to the rigidity of the tripod.—*British Journal of Photography*.

A New Intensifier

Harold Baker, writing in the *British Journal of Photography* on intensification and reduction, advises a modification of Edwards' mercurial intensifier which he says is free from the defects of the original formula. He says:

"The modification consists in making a solution of sulphite of soda and adding mercuric iodide in powder form, which quickly dissolves, and the intensifier is ready for use. Four ounces of soda sulphite are dissolved in twenty ounces of water, and forty grains of mercuric iodide are added. The iodide is in a fine, dry powder, which is sometimes difficult to dissolve, as air bells cling to it and prevent the water getting at the powder. I have found the easiest way to make the mixture is to put the sulphite crystals in a wide-mouthed bottle and add half the quantity of water; when a fair amount of the crystals has dissolved the powdered iodide may be added, and a vigorous shaking of the bottle soon dissolves the iodide, as the crystals of sulphite break the air bells and churn up the powder. The other half of the water is then added, and as soon as the remainder of the sulphite is dissolved the intensifier is ready for use. When first made up this solution acts with great rapidity, so the negative should be frequently examined for density, and removed just before the required strength is attained. After a slight washing, five minutes in any non-staining developer is said to make the result quite permanent, and the usual washing follows. The re-developer apparently slightly reduces the density, but this is more than made up when the negative is dry.

"This is the most convenient intensifier I

have ever tried, for it may be kept always ready for use, only a slight washing after fixing is sufficient before using it, and the increase of density is completely under control. If a negative has been dried it is always advisable to soak it for half an hour before intensifying, as the action may be uneven if the negative is greasy from handling. If it has been varnished, after all traces of varnish have been removed it should be soaked in water for about an hour and carefully examined to ascertain if any of the varnish remains, which will show by the non-swelling of the negative. Greasy negatives can be cleaned with motor spirit before soaking."

Leveling a Camera Without a Level

H. R. Stafford, in an article on the ground-glass screen, in *Photography and Focus*, says: "The presence of vertical lines on the ground glass is said to help in getting the camera vertical; but they are not required for the purpose. It is an easy matter to turn the camera on the tripod so as to bring some vertical line in the subject against the edge of the ground glass. It may not be generally known that this a very good method of leveling a camera. If we select a vertical line in the subject, and there are usually plenty in those cases in which it is important to have the camera level, and then turn the camera so that this line comes first close up to one side of the ground glass and then close up to the other, and find that in each case it is parallel with the edge of the glass, we may be quite sure that the camera is perfectly level."

Possible Utilization of Ultra-Violet Rays

Dr. Harting, writing in the *Photographische Rundschau*, points out that the ordinary lens of crown and flint glass, and still more the anastigmat of Jena glass, fail to transmit the waves of short length (300 to 200), and that the loss so caused to the plate is equal to the whole range of the violet (the most actinic part) spectrum. The production of lenses in a material capable of transmitting these rays would be a great desideratum, inasmuch as it would allow of very much shorter exposures without increasing the aperture, thus retaining depth of focus. Although the end may be still far off, a beginning has been made in the glass produced by Schott and Company and by the Parra Mantois firm.

INTERNATIONAL PHOTOGRAPHIC ASSOCIATION

New Members

- 3725—Roy A. Neil, Box 380, Lander, Wyo.
2½x4¼ and 3¼x5½, developing papers, of
landscapes and some photographs; for ma-
rines. Class 1.
- 3726—Thomas S. Kincaid, R. F. D. No. 5, Salis-
bury, N. C.
Class 2.
- 3727—Fred McBride, Ramona, S. D.
3¼x5½, post cards only, of general views;
for the same. Class 1.
- 3728—W. H. Welch, Smithfield, Ill.
Post cards, developing paper, of views and
street scenes; for views. Post cards only.
Class 1.
- 3729—James M. Connolly, 3091 Webster Ave.,
New York, N. Y.
3¼x5½ and 1½x2½, various papers, of some
foreign and some domestic views, etc.; for
the same. Post cards only. Class 1.
- 3744—H. D. Hineline, 625 Harrison Ave., Be-
loit, Wis.
4x5, developing paper, of speed work (ath-
letic events), and genre subjects; for genre,
landscapes, compositions and portraiture.
Class 1.
- 3745—John H. Allen, Plain Dealing, La.
Class 2.
- 3746—Ed Lewis, 802 W. 4th St., Pittsburg,
Kan. Class 2.
- 3747—Frank H. Renick, 1424 Belmont Ave.,
Seattle, Wash. Class 2.
- 3748—Charles A. Allen, Box 161, Whitinsville,
Mass.
4x5, 5x7, 3½x3½, 2¼x3¼, developing paper,
of art and landscapes, also historic build-
ings and places; for the same, lantern slides
and art pictures especially. Class 1.
- 3749—Wm. C. Thompson, 641 E. Market St.,
Scranton, Pa.
3¼x5½, 2½x4¼, various papers, of land-
scapes, cyclones, railroad construction, Get-
tysburg battlefield, etc.; for landscapes and
public buildings. Class 1.

RENEWALS.

- 1172—R. Weaser, 507 E. 5th St., Bloomsburg,
Pa.
Stereoscopic views of Watkins Glen, Kitch-
ens Creek Falls, nature scenery, and snow
scenes; for stereos only of natural scenery.
I send out good work and desire only good
work in return. Class 1.
- 1859—A. B. Stanley, Lone Rock, Ore.
Class 2.
- 2729—Fred A. Walker, 717 School St., McKees
Rocks, Pa.
1½x2½, of water, park and other views; for
the same. Class 1.
- 2805—R. Vincent Solomon, P. O. Box 201,
Madras, Ind.
3¼x5½, 3¼x4¼, 6¼x4¼, developing and
printing-out papers, of scenery, views, and
native types; for prints, any size, of deep
sea sailing ships, in dock, under sail, or at
anchor; no other subjects. Class 1.
- 2988—Harry M. Suter, 3005 W. North Ave.,
Baltimore, Md.
3¼x4¼ to 6¼x8½, developing paper, of
general views, landscapes, and harbor views;
for interesting and general outdoor views or
post cards. Class 1.
- 3083—E. Millard, 18 Fountain, Carnegie, Pa.
Class 2.
- 3124—C. R. Wentland, Robertsville, Ohio.
586

- 4x5, post cards, and smaller, of landscapes,
farm scenes, and a few winter, railroad and
Niagara Falls views; for views of general
interest. Class 1.
- 3358—Asa L. Brower, 2304 Jackson Ave., Og-
den, Utah.
Class 2.
- 3451—R. R. Baldrey, care Union Bank, Gis-
borne, New Zealand.
Class 2.
- 3495X—J. A. Lamar, 1609 W. Maine St., Enid,
Okla.
3¼x5½, post cards and developing paper, of
street and park scenes, buildings, and land-
scapes. Will exchange a package of five
post cards or paper with any I. P. A. mem-
ber who wishes to. Good work. Class 1.
- 3508—Norman W. Casper, New Burnside, Ill.
2¼x3¼ to 5x7 and enlargements to 8x10,
developing, printing-out paper and bromide
enlargements, of farm scenes, views of Ohio
river flood of 1913, dogs, cats, birds, and
other animals, also other views; for any-
thing of interest, especially lake, river and
marine views. Prefer description of picture
and no rubber-stamp impressions or writing
in ink or indelible pencil on prints. Class 1.
- 3700X—Allen Setterberg, R. F. D. No. 1,
Gowree, Iowa.
3¼x5½, developing paper, of landscapes and
farm scenes; for any good scenes or views
of interest. Unmounted prints only. Class 1.

CHANGES OF ADDRESS.

- 777—Herbert R. Gregg, Oroville, Wash.
(Was Bay City, Ore.)
- 2350—J. W. Green, Paonia, Colo.
(Was Ewa, Oahu, Hawaii, T. H.)
- 2786—Mrs. Franc Hagestead, Box 315, Barron,
Wis.
(Was Winnemucca, Nev.)
- 2805—R. Vincent Solomon, P. O. Box 201,
Madras, India.
(Was Wellington, New Zealand.)
- 2816—Leroy C. Ferry, Buhl, Idaho.
(Was Eden, Idaho.)
- 3109—Richard L. Berger, No. 2 Rear 26 N.
New Jersey Ave., Atlantic City, N. J.
(Was Mays Landing, N. J.)
- 3342—Warren W. Willison, 3535 Williams St.,
Denver, Colo.
(Was Normandy, Mo.)
- 3345—Rowe D. Murray, 1728 West Grand Blvd.,
Detroit, Mich.
(Was 484 Washab Ave.)
- 3394—George B. Ley, Lock Box No. 2, care
Theodore Ley, South Akron, Ohio.
(Was Kenmore, Ohio.)
- 3549—Joel Atkinson, U. S. S. Piscataqua,
Manila, P. I.
(Was U. S. S. Cincinnati, Asiatic Station,
via San Francisco, Cal.)
- 3589—B. P. Angle, care Y. M. C. A., South
Holland, Ill. (Was Tomahawk, Wis.)
- 3606—Sam M. Thomas, 2657 Dennis St., Cin-
cinnati, Ohio. (Was Catlettsburg, Ky.)
- 3702X—Joe R. Forkner, 4214 14th Ave., N. E.,
Seattle, Wash. (Was Missoula, Mont.)
- 3719—P. F. Jansen, Crowley, La.
(Was New Orleans, La.)

WITHDRAWAL.

- 3390—D. M. Wogaman, South Canon, Colo.
Moving from Colorado and uncertain of fu-
ture address; will notify members when
ready for exchange.

CLUB NEWS AND NOTES

Club Secretaries and others will oblige by
sending us reports for this Department

Elysian Camera Club

The Elysian Camera Club and Historical Section was organized in the year 1902. The Board of Managers meet the first Friday of each month; regular meeting of the club, second Friday of each month; annual meeting, second Friday in May, when election of officers takes place.

All meetings held at the club rooms, 307 Washington Street, Hoboken, New Jersey. The club offers all advantages desired by the amateur photographer. The Historical Section is a branch of the organization, whose object it is to collect historical records of Hoboken and vicinity, which are exhibited in the proper manner. Address all communications to the Secretary, Charles Westerburg, 636 Park Avenue, Hoboken, New Jersey.

The officers, who also comprise the Board of Managers, are as follows: President, Richard Reynolds; Vice-President, Albert Harrass; Treasurer, Julius Nelson; Secretary, Charles Westerburg; Financial Secretary, George Sting; Librarian, Charles Roderer; Chairman House Committee, Alfred McCulloch; Chairman Print Committee, Martin S. Crane, and Chairman Admission Committee, Richard Thiessen.

CHAS. WESTERBURG,

Secretary.

Exhibition of Color Photography

The French Photographic Society has organized an exhibition of autochrome, diptichrome, omnicolor and similar color-plate work, competition being open to all photographers, amateur and professional. Prospectus and rules governing the exhibition can be obtained by addressing Societe Francaise de Photographie, 51 rue de Clinchy, Paris, France. As anything of the kind held under the auspices of this society must rank very high in importance, it is particularly desirable that color-plate workers in this country

make full effort to be represented. While the opening date is April fifteenth, 1914, the sending for a prospectus and the preparation of an exhibit to be sent should not be delayed.

Porterfield's Remarkable Photographs

Twenty-five carbon prints by that eminent amateur photographer, W. H. Porterfield, of Buffalo, New York, are now on exhibition in one of the galleries of the Sweat Memorial Art Museum. Mr. Porterfield is one of the strongest amateur workers in this country, having been considered for some years among the very best who attain artistic results by means of the camera. Mr. Porterfield was the originator, and has always been the inspire of the Buffalo Pictorialists, an organization composed of earnest workers with the camera, who are anxious for advancement along artistic lines, and who meet for the purpose of discussing each other's pictures and suggesting ways by which they can be improved.

Among the more impressive pictures is a remarkably interesting composition quite resembling a painting in effect, which is called "A Suggestion of Barbizon," which is being much admired. Strong and notable, too, are the "Albright Art Gallery in Winter," several seashore pictures, "The Lowlands of Jersey," and a remarkable effect secured by merely photographing a big tree root.

So much praise has been accorded Mr. Porterfield's work in all parts of the country that the high standard of the pictures now being shown needs no assertion, though it would be pleasing to elaborate, were the space available, upon the remarkable artistic qualities which are shown in many of the works, all of which indicate the keenest knowledge of technical photography and thorough appreciation and understanding of tonal qualities, simplicity in composition, with strong atmospheric rendering.—Abridged from *Portland (Maine) Telegram*.

OUR BOOK SHELVES

"Photograms of the Year 1913"

"Photograms of the Year" has for the past eighteen years been regarded as the annual specially devoted to the pictorial photographer and his work. This year's volume, just published, contains a remarkable collection of fine pictures made with the camera by the leading workers in all parts of the world, and indicates in many ways the great advances made in pictorial photography as an art.

"Photograms of the Year 1913" contains nearly a hundred full-page pictures of large size, printed in a new double-tone process that renders each reproduction practically a facsimile of the original. The collection also includes a fine reproduction in colors of a picture made in the latest screen-plate method of natural color photography. Apart from the great interest of the annual to photographers generally, the book forms a notable volume of fine pictures that all art lovers should see.

Literary and pictorial contributions from all over the world are included in "Photograms of the Year 1913," which is edited by Mr. F. J. Mortimer, F. R. P. S., editor of *The Amateur Photographer*, and published by Hazell, Watson & Viney, Limited, 52 Long Acre, London, W. C., England. The price of the annual is two shillings sixpence net in stiff paper covers, or three shillings sixpence net in cloth boards. It is obtainable from all bookstalls, news agents and photographic dealers throughout the world, and the local firm of Hirsch & Kaiser can supply copies at one dollar and twenty-five cents for the paper covers and one dollar and seventy-five cents for the cloth covers, postpaid.

"The 'Wellcome' Photographic Exposure Record and Diary, 1914"

If brevity be the soul of wit, condensation is the essence of literature. Especially is it

so in these hustling days, when leisure is with many people reduced to a minimum quantity. It is for this reason amongst others that the pocket guide to photography issued under the above title obtains so wide a circle of readers. It condenses into one small volume, clear, definite and precise instructions on a very wide range of subjects. All the little wrinkles and dodges which long experience has taught the successful worker are here analyzed and set forth in simple formulæ and exact directions such as help the beginner and serve as a useful reminder to the expert. Development, toning, fixing, printing, the various processes of production in warm tones and colors, and the methods of dealing with errors of technique are explained, particular attention being directed in the 1914 edition to the green and blue toning, and the production of various colors by development and other methods. On the subject of exposure, this book is the last word, containing in addition to its light tables for each month and factors for plates and films, the special device attached to the cover which tells the correct exposure at one turn of the disc. Much discussion has taken place as to the best method of calculating exposure, but there is no doubt on the subject if you talk to a man who has used the "Wellcome" Exposure Calculator. As one such photographer put it, paraphrasing an old proverb, "The proof of the exposure is in the negative."

Three editions of the "Wellcome" Photographic Exposure Record and Diary" are published, one for the Southern Hemisphere, one for the Northern, and the third, a special edition, for the United States of America.

The "Wellcome" Exposure Record" may be obtained from all photographic dealers and booksellers, and at all railway bookstalls. Price in the United States, fifty cents.

NOTES AND COMMENT

A Department Devoted to the Interests of our Advertisers and Friends
In it will be found much that is new and of interest

Reported by William Wolff

Roberts & Horwarth, of San Jose, have added a new room to their now up-to-date finishing department.

E. O. Webb, of San Jose, is doing some very fine enlarging work.

H. Tonkin, formerly of San Francisco, has the Horne Studio in Salinas.

John Hall's studio at San Luis Obispo is being remodeled. Mr. Hall is spending a month in San Francisco.

A. R. Moore, of Porterville, owns the opera house there as well as the studio. Recently he had the show house retinted and eight hundred new-style chairs installed. Mr. Moore plays only the best attractions.

J. B. Janes apparently had his Christmas rush well started when the writer was in Bakersfield the latter part of November.

Charles Boussum now has a studio in Stockton, this making his third in the State.

Harry Willis, the Graflex emissary, is on his way south.

Maxwell & Mudge, of Fresno, have moved into a new ground-floor studio.

Frank Beck, of Fresno, recently took a few days off for a hunting trip.

Forsinark & Son, of Turlock, are doing some fine work in their new studio.

W. H. Sherer, the popular photographer of Santa Cruz, has bought an Overland automobile.

Tony Babb, of Howland & Dewey Company, Los Angeles, is quite a duck hunter. He brought home two jack rabbits while the writer was in that city.

During the month of December, Fred Hartsook employed over three hundred and fifty people in his eight studios. He received one full carload of plates and used about eight thousand dollars' worth of photographic paper during the month.

Harold G. McCurry, the enterprising commercial photographer at Sacramento, is more than busy these days. He is photographing a number of entire counties for the officials.

The California Card Company has opened a branch in Los Angeles with a good stock of their products ready to supply the local trade. Mr. Wallace has been placed in charge.

Breaking the Monotony

This is the season of the year when our readers are most concerned with the making of prints from their negatives, and a suggestion that bears on this work should be quite timely. One often has cause to regret the rather monotonous appearance of a collection of prints, even if both black-toned and sepia prints are included. Few workers fail to realize the possibilities placed in their hands by the excellent toning tablets put on the market by Burroughs, Wellcome & Company, under the trade mark name of "Tabloid." These come in neat cartons containing a bottle and a vial of A and B tabloids, respectively, twelve of each, which require only the dissolving of one each to produce a toner that may be used for several prints on gaslight or bromide prints in succession. "Tabloid" Green Toner and "Tabloid" Blue Toner are the two which we have ourselves used, and we can recommend them to our readers as satisfactory in every way. Introducing a few prints of these tones into a collection adds greatly to its value, particularly if care is used to so tone those subjects for which the two colors seem best fitted. While "Tabloid" photographic chemicals can be obtained from practically any dealer, the reader should write directly to Burroughs, Wellcome & Company, 35 West Thirty-third Street, New York, for booklet, "Helps and Hindrances in Photography," which the dealer may not have.

Photography at the Syracuse University

With the beginning of 1914, the Photographic Department of Syracuse University will move into a new building, one which has been expressly built for it. Students will then be permitted to enter for special courses.

The Wollensak Optical Company, of Rochester, has presented the College with a fourteen and one-half inch Verito soft-focus lens, fitted with a studio shutter. Messrs. Schering & Glatz, of New York, have donated a supply of their Assur colors, Duratol and other chemicals. The C. P. Goerz American Optical Company have given a fourteen-inch Celor lens with a compound shutter. Schott & Genossen, the manufacturers of the famous Jena glass, have sent a complete sample of all the raw materials used in glassmaking, with samples of a large variety of optical glass. The firm of Carl Zeiss has given the school several text-books and other literature written by its scientific staff.

"Fun—And Better"

The above is the title of a handsome booklet that has just reached us, and we feel sure that it contains a wealth of suggestions that will interest a large proportion of our readers. It is intended to set forth the use of the Home Balopticon and is made up particularly of suggestions for instructive and entertaining home use. Some of the titles are: Comic Cartoons, Musical Evenings, Vacations Reviewed, "Guess" Evening, A Sketching Competition, "Snap-Shot" Evening, Illustrated Tours, A Problem "Fest," and others.

When it is considered that these ideas can be carried out by the employing of ordinary opaque pictures such as are furnished by the common pictorial post card, magazine illustrations, and the like, one can secure a good idea of the applicability of this home projecting machine, one which is also suitable to the projection of the regular lantern slides. The fact that the apparatus is manufactured and supplied to dealers by the Bausch & Lomb Optical Company is a guarantee of its high quality and perfect workmanship.

Another smaller booklet is entitled "The Home Balopticon," and this gives descriptive matter, illustrations and prices of the two models and equipment therefor. Readers are advised to secure copies of these two booklets that can be obtained upon request of the Bausch & Lomb Optical Company, Rochester, New York.

An Interesting Photograph

There hangs in the Smithsonian Institute at Washington a full-length portrait that is

particularly interesting, by reason of the fact that, while it is one-third larger than life size, it is a direct, contact print from a negative of corresponding dimensions. This negative, perhaps the largest ever made, required the building of special machinery for the coating of the plates used and the paper required in making the print. It is needless to say that a regular camera was not employed, the plate being exposed by using a small portable room for the purpose, this makeshift camera being equipped with a lens of unusual dimension. A lens of the requisite size had, quite naturally, but very little depth of focus, and in order to secure the necessary definition, had to be stopped down to a point where intense illumination was required in order to bring the exposure time within reasonable limits. This last difficulty was overcome by using the Nichols flashlight outfit, and the resultant negative, one of two of different subjects made at the same time, is a remarkable testimonial to the proficiency of both the Nichols flashlight outfit and the Nichols flashlight powder. Particulars of this apparatus and other flash specialties may be secured by addressing the Charles A. Nichols Company, 1317 Euclid Avenue, St. Louis, Missouri.

The Dark Days

Those dark, rush days are now here and "Old Sol" is due to receive considerable condemnation. Better spare him, save your temper and increase your earnings by installing a Victor Studio Flash Cabinet in your operating room. It will pay for itself before the winter months are over, and it may be possible that you will so appreciate its convenience that you will use it exclusively for all your portrait work. Other good professionals have done so. Write James H. Smith & Sons Company, 3541 Cottage Grove Avenue, Chicago, Illinois, for particulars.

An Additional Line Offered

Allison & Hadaway advise that they are pleased to announce the securing of the American agency for the excellent line of photographic goods manufactured by Marion & Company, the well-known British manufacturers. The dainty Soho camera is destined to make a strong appeal because of its simplicity of operation and the workmanship displayed in its construction. Camera users

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desirous of acquainting themselves with a particularly well-equipped reflex camera should investigate the merits of the Soho. The mirror operates without vibration, even on slow speeds; and, as it moves backward in a curve, it permits the use of very short-focus lenses when such are desirable. When this mirror is down, a light-tight chamber is formed, fully protecting the plate with the holder slide withdrawn. The camera is fitted with a ground-glass focusing screen for use when a tripod is employed, and the back can be instantly reversed by simply pressing a lever that retains it in position. Look up the advertisement of Allison & Hadaway on another page and send them your request for these interesting catalogues.

Moving-Picture Cameras

Catalogue A, Projecting Apparatus, Moving-Picture Cameras, Projectors, Lenses, Stereopticons, is the title of a handsome little booklet just to hand. It contains illustrations and prices of the Urban Bioscope, the Williamson and the Ernemann moving-picture cameras, a full line of Cinematograph lenses by the best makers, tripods, tripod heads, projectors, and other accessories. It is published by Burke & James, 240-246 East Ontario Street, Chicago, Illinois. A copy will be sent, upon request, to those who mention this magazine, we have no doubt.

"Home Entertainments"

The above is the title of a handsome and instructive booklet just gotten out for free distribution by the manufacturers of the well-known and justly popular Radiopticon line of picture projectors and photographic specialties. It is handsomely printed and illustrated, and contains much information that is particularly applicable and suggestive at this season of the year. Our readers should all send for a copy at once, as they can hardly fail to find the contents other than of the deepest interest. There are included a number of excerpts from the book, "Hints for Home Entertainments," a book that is furnished with each Radiopticon sent out. Address our inquiry for a copy to H. C. White Company, 502 River Street, North Bennington, Vermont.

The Korona Panoramic View Camera

Attention is called to the advertisement, new this month, of the Korona Panoramic View Camera, manufactured by the maker

of the well-known Korona line, the Gundlach Manhattan Optical Company, of Rochester, New York. This camera is made in 5x12, 7x17 and 8x20 sizes, being just half of the regular 10x12, 14x17 and 16x20 sizes, which, as every photographer knows, are really rather poorly proportioned for view work. By making the view camera to take plates as does this Korona Panoramic, both bulk and weight are greatly reduced, as is also the operating expense, without cutting down the size of the picture, the unused portions of the full-sized plates of the old-style cameras being either trimmed away or printed as needless sky and foreground. The many good points of this camera and details concerning the superior lens equipment would take up too much room, and we would therefore suggest that the reader write for a descriptive circular covering these matters, addressing Gundlach-Manhattan Optical Company, Rochester, New York.

The New Multi-Speed Factory

The illustration herewith represents the factory building of the Multi Speed Shutter Company, which is being extensively enlarged in order to secure about three times the capacity of the former factory, which has only been in existence about nine months.



This enlargement of the factory is made necessary to facilitate the proper handling of the rapidly increasing demand for the firm's line of Precision Cameras and to permit the company to supplement this line with an increased number of models to include Folding Cameras for view and studio purposes. The new factory will also accommodate the equipment necessary for the manufacture of a new line of Anastigmat lenses entirely of their own construction that the firm will put out. In addition, the manufacture of the firm's new Amateur Cinematographic Camera will be given the

necessary room, and it, together with all accessories to that line, will be pushed vigorously immediately upon the completion of this handsome new factory.

New Developer for Instanto

The Photo Products Company have recently perfected an M-Q Developer for their papers, one which they are putting out in a very convenient package containing six tubes, each making five ounces full-strength developer, the price being only twenty-five cents, prepaid. This developer is made with special reference to the requirements of their paper, but its chemical purity and accurate composition make it an excellent developer for general use.

To correct an erroneous opinion which the name "The Photo Products Company" conveys, we wish to say that this company are strictly manufacturers of paper and post cards and handle no other supplies excepting developer. Their business is done direct with the consumer. If you would learn of their direct policy and become familiar with the papers they make for amateur, professional and commercial purposes, write for price list, or accept the trial offer on Instanto found elsewhere in this issue, mentioning this magazine in doing so.

Agencies In Demand

The manufacturers of the Visible Photo Printer, advertised on another page, advise us that they are more than pleased with the result of the few insertions of their announcement in our pages. The "Visible" has met with instant approval, several firms sending in prompt and gratifying orders, with request for exclusive territory, following the first showing of the machine. It is the desire of the firm to close territory with State agents all over the country for such territory as is still open, and dealers should make prompt application. Any of our readers who have made or intend making purchase of one of these exceptionally effective printers will be doing their dealer a kindness by calling his attention to the opportunity presented, in case the territory is not already secured by some other more enterprising firm. Address the Visible Photo Printer Company, 310-320 Washington Street, Brooklyn, New York.

The Ensign and Sylvar Cameras

The Ensign catalogue is now ready for distribution and it covers a full line of these

popular instruments ranging in price from two dollars and twenty-five cents upward. Our readers can secure a copy by addressing G. Gennert, 24-26 East Thirteenth Street, New York City; 230 South Wabash Avenue, Chicago, Illinois, or 682 Mission Street, San Francisco. This firm is advertising, on another page, a camera that is compact and complete in every detail, the Sylvar, one which our readers will do well to investigate. It has been designated "The Aristocrat of the Camera World," and you will want to know more about an instrument of that character. The prices are exceptionally reasonable for the quality offered, and both the amateur and the advanced semi-professional should be interested. Write G. Gennert at any of the three addresses given above for particulars and prices; and, even should he not have them in stock, your local dealer will undoubtedly be pleased to get one for you.

Illinois College of Photography

An interesting item in the photographic magazines last month was the notice of the election of Friend Cochran to the presidency of the West Virginia Photographers' Association. Mr. Cochran was a student at the I. C. P. in 1907.

The engravers and photographers played their final game of baseball on Saturday, the twenty-fifth; the photographers conquered by the overwhelming score of seventeen to nine.

About twenty of the students held a Halloween party in the basement of the M. E. church on the first. A fine time was reported by all present.

The Ernemann Cameras

Max Meyer, 18 West Twenty-seventh Street, New York City, the well-known importer and dealer in scientific instruments and laboratory apparatus, advises us that he is still filling orders for the Ernemann line of cameras, lenses and other apparatus and equipment to photographers and the trade, and finds the demand upon him for this superior line of photographic apparatus is constantly increasing in a most gratifying manner. He has been favored with a large number of orders as well as inquiries through his advertisement in our pages, and these are being taken care of with the same promptness which has characterized his business since taking up this line.

